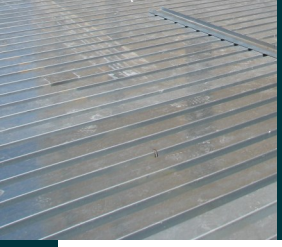

Pressure Treated Lumber on Metal Deck

060000

Construction Excellence Bulletin

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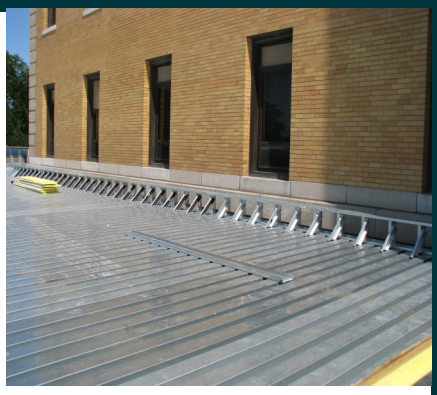
A typical detail we often see in Construction Drawings is treated wood blocking in direct contact with a metal deck or metal studs. This direct contact between the treated wood and metal can cause corrosion of the deck or studs..

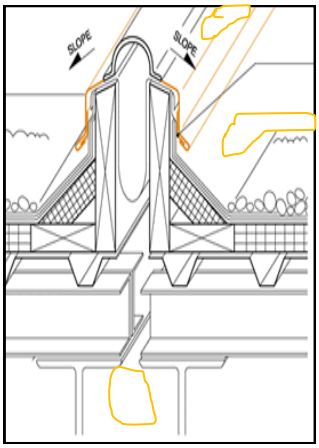
According to the Steel Deck Institute's position statement, we should **NOT** be placing treated wood directly on any metal deck material, including non-galvanized, painted, and galvanized. We need to have a slip sheet separating the two materials. The slip sheet is recommended to be an Ice-and-Water Shield material. This recommendation would also include metal studs (such as the top of a parapet).

Also note that most roofing manufactures now recommend using Southern Pine or Douglas Fir structural grade #2 or better, in lieu of treated lumber for their nailers due to the caustic nature of the preservative. The complete encasement of the wood from roofing materials, A/V barriers, and other components makes non-pressure treated wood unlikely to deteriorate from moisture.

Please discuss this potential condition with your Architect prior to the installation of any treated wood blocking on metal decking or metal studs. Discuss the recommendation from the roofing manufactures and don't use treated wood for this application.

Corey S. Zussman, AIA, NCARB - QA/QC Vice President





❒ Corrosion of steel deck products and Cold Formed Metal Framing in direct contact to pressure treated lumber has become an issue due to the change in products used in treating pressure treated lumber. The copper that is used is very corrosive to galvanized metal.

❒ The pressure treated lumber industry now treats lumber with products referred to as ACQ (Alkaline Copper Quat) and CA-A or CA-B (Copper-azole). Pressure treated lumber treated with these products have shown to be highly corrosive when in direct contact with sheet steel (similar to the Construction Excellence Bulletin #22 about fasteners and treated lumber).

❒ Corrosion testing was conducted by Touchstone Research Laboratory, Ltd following the procedures contained in the American Wood-Preservers Association Standard Procedure E-12 "Standard Method for Determining Corrosion of Metal in Contact with Treated Wood." The sheet steel specimens tested were coated with G60 Galvanize, G90 Galvanize, shop applied White Primer, and shop applied High Heat Gray Primer. The tests were conducted with steel specimens in direct contact with the pressure treated lumber and with a barrier between the pressure treated lumber and steel specimen. The barriers included were 30 lb. Felt Paper and Ice and Water Shield.

❒ ***CFMF is typically coated with G60 or G90 galvanizing.***

❒ The Steel Decking Institute has issued a position statement, based on the Touchstone Research Laboratory study:

"The results of this study found that the use of Water and Ice Shield material was most effective in preventing a corrosive reaction between any of the steel products tested and either type of pressure treated lumber. Effectively, there was no surface damage where the water/ice shield contacted the metal or painted surfaces. The use of No. *30 roofing felt was somewhat effective* in minimizing the corrosion of the various steel products, but does not appear to offer substantial improvement over direct metal to wood contact. Direct contact with the pressure treated lumber grades had the anticipated effect of corrosion on both the galvanized products and the painted steel materials in that the zinc coating and/or the paint and the base steel were damaged by direct contact with the treated lumber."

The Steel Deck Institute recommends a barrier of Ice & Water Shield or equivalent be used between pressure treated lumber and steel deck products or accessories.

Adopted by SDI - August 2006

Reference:
Stauver, H. L. (2004)
Evaluation of the Corrosion of Sheet Steel Building Products In Contact With Pressure Treated Lumber"
Touchstone Research Laboratory, Ltd., report 5349

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