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PROTECTION FOR STEEL CONNECTORS, FASTENERS AND ANCHORS USED WITH PRESSURE TREATED WOOD PRODUCTS

The intent of this Bulletin is to inform industry that the City of Vancouver has been made aware of changes in the chemical treatment used for pressure treated wood products. These new preservatives have led to the accelerated corrosion of steel connectors, fasteners and anchors associated with the installation of pressure treated wood products. It has been identified that in some cases these steel components have actually failed within a very short time frame. Steel connectors and fasteners are typically used for the construction of residential wood frame balconies and decks.

In the past, Chromated Copper Arsenate (CCA) was commonly used for pressure treated wood products. Due to public health concerns with the use of arsenic (an inorganic toxic substance) found in CCA, the industry voluntarily stopped using CCA for pressure treated wood products as of December 31, 2003.

Since the withdrawal of CCA, Alkaline Copper Quaternary (ACQ) has primarily been used for pressure treated wood products. Unfortunately, ACQ has proven to be highly corrosive to standard steel connectors, fasteners and anchors formally used with CCA treated wood products. It should be noted that the Homeowner Protection Office (HPO) recommends that hot-dipped galvanized fasteners and connectors not be used for wet conditions. (See Builder Insight Bulletin published by HPO, "ACQ: Alkaline Copper Quaternary Treated Wood". This bulletin may be found at: www.hpo.bc.ca/Research/index.htm.) Therefore, in order to prolong the service life of steel connectors, fasteners and anchors, it is recommended that stainless steel connectors, fasteners and anchors be used with all ACQ pressure treated wood products.

Recently constructed homes should be inspected in order to determine if any corrosion has occurred on the exposed steel components used with wood frame structures. If any serious corrosion has occurred, it is recommended that these steel components be replaced with compatible connectors.

In general, the following should be considered when selecting steel connectors, fasteners or anchors:

- the type of pressure-treated wood to be used should be suitable for the intended application,
- always use connectors and fasteners having the same material type,
- use stainless steel fasteners with stainless steel connectors (Type 304 and 316), and
- never use aluminum components in direct contact with ACQ.

It is recommended that the manufacturer always be consulted for compatibility of metal components used with specific types of pressure treated wood products.

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