

## New Wood Treatment Chemicals Pose Increased Corrosion Risk

*Editor's Note: The following article has been reprinted with permission from the April 2004 LGSEA Newsletter.*

As of December 31, 2003, the United States Environmental Protection Agency (EPA) has banned the sale of chromated copper arsenate (CCA) as a wood preservative. Companies that pressure-treat lumber to prevent insect infestation and decay no longer are able to buy CCA to treat their products. This does not mean that CCA products will no longer be available, however when stockpiled quantities of CCA are gone, treatment will be by alternative methods.

The three most popular alternatives currently being used are copper azole (CA), ammoniacal copper quaternary (ACQ), and sodium borate (SBX). The high copper content in the CA and the ACQ products can lead to accelerated corrosion of steel connectors, steel fasteners, and steel framing members in contact with the treated wood. Borates, while fine for applications that will remain dry, are not recommended for outdoor use or in areas where it may get wet or come in contact with the ground. This is because sodium borate is water soluble.

Compared with CA, ACQ has been aggressive when in contact with steel, but a recent reformulation has lowered the corrosion rate to about that of CA. Still, both formulations are more corrosive than CCA.

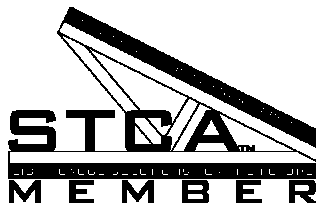
The Steel Framing Alliance has issued guidelines on the use of steel framing with pressure treated wood; they give the following recommendations to alleviate problems:

1. If using wood in dry areas, specify sodium borate pressure treatment, and ensure that the wood is transported and installed in a manner where it will remain dry.
2. Corrosion can be prevented by isolating the steel and wood components. This can be as complex as designing a system of corrosion resistant connectors, or as simple as applying paint or building felt between the steel and wood.
3. Avoid the use of pressure treated wood altogether.

For connectors and fasteners that must be in contact with the pressure treated wood, the primary option is to provide heavier galvanizing on the material. For nails and other fasteners, hot-dipped galvanized is recommended. For hangers and connectors, products such as Triple Zinc<sup>®</sup> from USP Connectors or Z-Max<sup>™</sup> from Simpson Strong-Tie will provide added protection. For a more detailed discussion of the problem and some of the solutions, go to the website <http://www.taunton.com/finehomebuilding/pages/h00127.asp>. For additional information and a full copy of the Steel Framing Alliance report, go to: [www.steel framingalliance.com](http://www.steel framingalliance.com)

## Update from CSI

The Construction Specifications Institute (CSI) has assigned a proprietary section number for cold-formed steel trusses. The number is to be 054400. This long awaited development will make it easier to locate information on cold-formed steel trusses in project specification manuals in addition to marketing materials relating to this popular product.



Light Gauge Steel Engineers Association

The cold-formed steel truss industry has been promoting the assignment of a section number for several years. Marketing literature will take some time to be updated as this process takes place.

## Photo Gallery

The St. Mary's Monastery located in Rock Island, Illinois, highlights this issue of a project that has used cold-formed steel trusses.



**Exterior view of entry to St. Mary's Monastery. The building sits on a hillcrest overlooking an 83 acre wooded site.**

The 72,500 sq. ft. facility was built by Russell Construction of Bettendorf, Iowa, and features a library, chapel, dining area, offices, and a heritage room in addition to meeting rooms and bedrooms for the residents. The editor would like to thank the contractor for providing these photos.

One unique aspect to the project is a four-acre lake that provides geothermal heating and cooling for the Monastery in addition to a pleasant environment for the Sisters that live at the facility.



**Exterior view of the monastery with the four-acre lake which provides geothermal heating and cooling.**

Builders Sales and Service Company, Moline, Illinois, performed the truss installation. Scott Fournier, company president, was impressed with the speed and ease of erection. "The St. Mary's Monastery project was our first large cold-formed steel truss project using Cascade Mfg Co and Alpine TrusSteel. After fabricating our own trusses utilizing 'C' shapes for many projects, it did not take us long to realize the significant material and labor savings using TrusSteel. We were very pleased with the support of Cascade Mfg Co in helping our field personnel get familiar with the product. We have completed numerous projects since St. Mary's using Cascade and TrusSteel and have had great results."



**Interior view of the chapel at St. Mary's Monastery**

This project had many unique aspects that resulted in a dramatic finished look. For more information on Builders Sales and Service Company, go to [www.bsscompany.com](http://www.bsscompany.com).

Architects experience great design versatility with the use of cold-formed steel trusses. Top and bottom chord planes and slopes can accommodate just about any desired effect.

TrusSteel is the proprietary shape preferred by most contractors. Its unique symmetrical design allows for safe and fast installation with less bracing. The result is a lower installed cost for contractors with the quality assurance of a well-designed and well-built truss project.

Architects and contractors rely on the expertise at Cascade Mfg Co to assist with value-added design and engineering advice. Put our knowledge of over 40 years of truss component design, experience, and manufacturing to work for you. Contact us at 800/942-4685. Or email us at [info@Cascade-Mfg-Co.com](mailto:info@Cascade-Mfg-Co.com).