

editor's note



IN THIS AGE OF ALTERNATE FACTS, IT SHOULDN'T SURPRISE ME TO READ SOME OF THE WIDELY PROMULGATED MYTHS ABOUT CONSTRUCTION MATERIALS.

So while I'm not surprised, I'm still disappointed, especially when journalists don't make even a cursory check using widely available information. My favorite myth, and one I see constantly repeated almost every time an article about tall wood buildings is written, is that cross-laminated timber (CLT) is as strong as steel. But it turns out that a spruce-pine-fir CLT panel has a tensile strength of 1,375 psi in the major strength axis (parallel to grain) and even less in the minor strength axis (perpendicular to grain). By comparison, today's structural steel typically has a minimum tensile strength of 50,000 psi.

And from there, the myths just keep multiplying. I often read that the Empire State Building could be built with CLT. Of course it could, but there wouldn't be any leasable space and the cost would be colossal.

Or there's the myth that wood is far more sustainable than other structural materials. But many of the environmental claims of wood products neglect to consider the real world and instead appeal to people's emotions. Some of the questions that you should be asking include:

- ▶ What species of wood is used?
- ▶ If looking at manufactured products such as CLT, is the impact of the additional chemicals considered?
- ▶ Is the wood harvested from sustainable forests (which comprise less than 7% of U.S. forests)?
- ▶ Is the wood from old or young trees?

- ▶ Does the environmental impact analysis include the waste material left after harvest?
- ▶ Does the analysis include the disposal of the wood (typically incineration)?
- ▶ Does it take into account both pre- and post-consumer waste and the impacts related to the disposal of that material?

If you really want to cut through the myths about wood and sustainability, check out AISC's white paper at www.aisc.org/discover.

Perhaps the most tragic myth being promulgated is that wood doesn't burn, it chars. (Think about that the next time you're roasting marshmallows over a campfire.) But even if you accept the charring myth, you still need to think about how you extinguish the fire and how much water is needed to completely put it out. You also need to consider long-term impacts of mold and the long-term odor of burnt wood. And you need to consider how to reinforce the building to make up for the change in structural capacity after charring.

There are some rational reasons for considering wood, but they apply more to meeting a specific aesthetic—through finishes, flooring and accents—than to structure. So the next time you read a bubbly endorsement of the future of wood construction, make sure you examine those claims with a healthy dose of skepticism.


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