Let's talk about ..What's New in S269.2

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Once upon a long, long time (like around 1974), in a land far, far away (like Vancouver, BC) a group of interested individuals met to discuss what ought to be considered in a new CSA Standard about Scaffolds in Construction. Someone said, "We need a Factor of Safety of 2 and a half for supporting concrete." Someone else said, "But if we're supporting workers, we need a Factor of Safety of at least 4."

Ultimately, the decision was made to deal with supporting concrete independently of supporting people. So we ended up with S269.1 (issued in 1975) for concrete, and S269.2 (finally issued in 1980) for access. In 1987, it was decided that we'd better introduce metrics into our work, so S269.2 was re-issued with metric notations.

Not much more was done with that version of the Standard other than including "specific requirements for the testing and load rating of platforms other than sawn lumber."

The 269.2 Standard stayed stagnant for over 20 years. In fact, in 2008, CSA proposed that the Standard be withdrawn "as it is outdated in many respects, and does not have provisions related to the advances in the industry (as an example, system scaffolding)."

Fortunately, there was enough support (although with an awful lot of arm-twisting) to consider updating the standard to address all the shortcomings of the M87 version.

So, coming shortly, is the updated version. It was out for Public Review until last October 5. Since then, the Committee has met to review and resolve es that were presented at that time.

One of the main items of concern was the adoption of an across-the-board Factor of Safety of 4 for all scaffold components. For whatever reason, the original committee proposed a number of different Factors of Safety (referred to as Reduction Factors). Table 3 listed various factors for different items: Vertical Frames, Vertical Members, Horizontal Members, and Tube and Clamp.

The new version states that, "The rated capacity of the system or component is based on testing to failure (ultimate value) with an applied factor of safety of 4." This makes a lot of sense, because the earlier versions of the Standard applied the lowest Factor of Safety to the weakest (and most important) component, the platform.

On the subject of platform, the concentrated loads required for testing platforms has been taken out. That's because the "Light-Duty" platforms were penalized heavily compared with "Heavy-Duty" platforms.

For Light Duty on a 7 ft long, 10" wide plank, we were asking for an overall loading of 529 lb. 242% of the intended load. We were asking for an additional 208 lb to be applied to a plank that was supposed to support 146 lb. By adopting a 4:1 FS, we are asking for 584 lb. -- not much of a difference from what has been required up to now.

Similarly, for Heavy Duty on the same plank, we were asking for 1186 lb., only 151% of the intended load. We were only adding 222 lb onto a plank that intended to carry 438 lb. Using 4:1, we now ask for 1752 lb. -- this gives us a better safety factor on the higher load platform, which certainly makes sense to me.

The new version of the Standard introduces Limit State Design, which was never previously addressed. Factors have been added to make the Limit State calculations relate to the Working Stress calculations. That is, to make the Factor of Safety using either method come out the same.

It seems that the new version is more complete and up-to-date than any version we've had before. We're even addressing System Scaffold now!

Although S269.2 is mainly directed at manufacturing of scaffolds, it's going to make scaffold design simpler and brings us more into alignment with the USA. Most scaffold components have been tested and rated up to now with a 4:1 Safety Factor, because most of the marketing was aimed at the US.