editor's note



NEWS FLASH! AISC announces that development is underway on a new energy-saving standard to mandate the use of round ductwork in buildings over three stories.

Okay, that would be ridiculous. But is it any sillier than the American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE) and their proposed Standard 189.1, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings? While much of the standard is clearly within ASHRAE's scope of expertise, for some reason they have included a section focusing on structural material issues. Adding insult to injury, the subcommittee that worked on that portion of the proposed standard was almost laughable in its lack of balance and expertise; it consisted of an architect working for a government owner, a marketing representative for the lighting industry, and a paid consultant representing the concrete industry.

The proposed standard also contains some of the most convoluted reasoning I've heard outside of my kid's kindergarten classroom. Essentially, the proposed standard would limit the contribution to the recycled content of the project of any one material to 5%. At the same time, the standard would allow concrete to claim a recycled content based not on its total recycled content, but instead on any one component of the mixture. That means that if fly-ash was substituted for 25% of the cement (which itself represents 10% to 12% by weight of the composition of concrete), concrete would be considered to have a 25% recycled content rather than the actual 3%.

Structural steel, which currently has about an 88% recycled content, would be given credit for contributing 5% to the recycled content of a building (the maximum allowed by any one material), while concrete, which even with flyash only has a 3% recycled content, *could potentially receive* the same 5% credit (*assuming they add some recycled aggregate*), PLUS an additional 5% credit for its rebar content (which, incidentally, typically has a lower recycled content than structural steel).

So what's the bone-headed reasoning behind this baffling conclusion? The theory is that steel is so inherently green that it doesn't need any incentive to be the premier sustainable material. Concrete, on the other hand, presents so many environmental issues that it's critical to give it every push possible on the sustainability front. In other words, punish the early adopters of a green sensibility in favor of those who resist it (or only give it lip service) in hopes of reforming them.

The argument ignores steel's long history of environmental activism, including reducing its carbon footprint by 47% since 1990 and cutting its energy use by 9% during the past decade (with plans for substantial future reductions). Steel is so desired as a recycled material that salvage yards are actually shrinking as they sell off their old inventory of scrapped cars. (As AISC's John Cross explains: "Today, demolition contractors are often paying for the opportunity to demolish and scrap a structural steel building because of the value of the structural steel. In contrast, buildings using other materials cost between \$3 and \$10 per square foot to demolish, scrap, and landfill.")

Finally, unlike other structural materials, the production of structural steel conserves our most valuable resource: water. The only water used in the production of structural steel is part of a closed-loop recycling process. Structural mills discharge no wastewater into the environment. And unlike other building materials, water is not used in the fabrication process, and no water is used or discharged at the job site as a result of structural steel.

I urge you to protest ASHRAE's absurd, misguided, and misinformed intrusion into the structural marketplace. Please visit **www.aisc. org/ashrae** to learn the specific issues involved with the proposed Standard 189.1, and discuss your objections with your peers and others involved in the design, construction, and regulation of the built environment.

Scott Me

SCOTT MELNICK EDITOR



Editorial Offices

One E. Wacker Dr., Suite 700 Chicago, IL 60601 312.670.2400 tel 312.896.9022 fax

Editorial Contacts

EDITOR & PUBLISHER Scott L. Melnick 312.670.8314 melnick@modernsteel.com MANAGING EDITOR Keith A. Grubb, P.E., S.E. 312.670.8318 grubb@modernsteel.com ASSOCIATE EDITOR Geoff Weisenberger 312.670.8316 weisenberger@modernsteel.com

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