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Has Demand Lived Up To The Hype For Cool Metal Roofing?

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The editors of *Metal Construction News* have asked me to address the question “Has demand lived up to the hype for cool metal roofing?”--a simple question on the face of it, but one that lends itself to conflicting responses and presents a complex challenge to all manufacturers in the metal roofing industry. LEED, Title 24, EnergyStar and the CRRC--none of this had any relevance to our business a decade ago. It sure does today!

If you had asked me to define “solar reflectivity” or “emissivity” just a few years back, you would have been met by a blank stare. Today such measurements have become a central focus of our marketing efforts and yet their ultimate interpretation may represent either a major opportunity or a potential threat for the metal roofing industry.

On the face of it, one could argue that demand has not lived up to the hype. Days, and sometimes weeks, might pass between projects requiring actual LEED product certification. When we do see projects requiring “cool roofing”, the vast majority have been government buildings. Commercial construction has seemingly been slower to adapt the advantages of cool roofing. A cynic would say that the private commercial construction industry will wait until it sees a direct financial incentive--or regulatory requirement--before it acts.

Personally, I think that true demand for cool roofing has been underestimated. I don't think that true demand should be estimated on the basis of how many projects require LEED certification. I do think that most architects are fundamentally driven to reduce the environmental impact of their projects. I do believe that architects, when presented with an opportunity to improve a project's energy efficiency, will do so. We kept those parameters in mind when we undertook our effort to adopt our cool color product line.

For our company, the development of a cool color product line became primarily an inventory management challenge. Most of our light colors and metallic colors made the grade without modification. The darker range in our color palette required significant modification. The question was: develop an entirely new product line or find a way to modify our existing products? I won't divulge how we did it but I will say that the end result will prove to be worth the cost.

The primary theme of this section of MCN is business development. I believe cool metal roofing represents a real opportunity for our industry. Architectural metal coatings and in particular, PVDF coatings, offer the roof designer a wide range of color options while providing high emissivity ratings. A recent three-year study completed for the Cool Metal Roofing Coalition by the Oak Ridge National Laboratory confirmed this information. Pre-painted samples in this test were found to retain over 95% of their initial solar reflectivity while emissivity ratings were shown to actually increase slightly.

These test results put pre-finished metal roofing products at a tremendous advantage over other roofing alternatives. When it comes to solar reflectivity, our industry's products maintain their reflectivity at a much higher percentage for a much longer time than almost any other roofing alternative. Given the fact that solar reflectivity is the biggest factor in reduction of cooling costs, why should current standards allow for a 30% reduction in reflectivity after three years of weathering? We have a product that can sustain a much higher level of performance for a much longer period of time. Is that not sustainable design? As an industry, we should be lobbying for tighter weathering standards over a longer period of time--it is our competitive advantage.

What about recycled content and recyclability? Our input steel is 28-35% recycled content and it's 100% recyclable. Our input aluminum is 90% recycled content and 100% recyclable. That's easy enough to determine but frankly it's been pretty challenging to press our vendors to come up with good information regarding the percentage of post-industrial to post-consumer scrap content. And just when we had gotten our hands around that, LEED 2.2 was released calling for "the location from which each material was extracted/harvested/recovered." (!?).

In the final analysis, has cool roofing demand lived up to the hype? Not yet. Will it do so? I strongly believe it will. If anything, the rising cost of energy will provide significant impetus for the growth in demand. The metal roofing industry can turn this into a significant opportunity for growth. To do so, we need to be active at all levels where policy is being developed. Cool metal roofing has a good story to tell. It will be a challenge to the leaders of this industry to get out there and tell it.