

# PLYSCRAPERS ARE ON THE RISE

After reading about how the steel industry is aiming to lead the Green Movement, there are others changes afoot in the construction industry. Instead of your typical steel and concrete construction, a new skyscraper alternative, referred to as plyscrapers made from mass timber, is being



introduced by architects and builders. There is a 20-story hotel and cultural center in Skelleftea in northeastern Sweden where the floors, ceilings and support beams are entirely made from spruce and pine harvested from nearby woodlands. The 323,000 square foot complex is part of an emerging trend where this mass timber is utilized. It is wood that is glued and pressed in special ways to make it similar in strength to concrete and steel and is capable of replacing those materials. Advocates of mass timber construction maintain that it is more environmentally friendly than conventional construction. The carbon footprint can be half of a similar building made of concrete and steel.

The number of multistory mass timber buildings built in the U.S. rose 50% in the past year to more than 1,300 structures. Currently the tallest structure in the U.S. incorporating this design is a 25-story residential complex in Milwaukee. There

is a proposed 70-story building being erected in Tokyo and an 80-story structure planned in London.

In addition to the potential environmental benefits, construction experts say mass timber buildings can cost less to build than concrete and steel structures. With a building made from concrete, fabricators must wait for the concrete to cure before moving forward. According to the mass timber experts, a project can be completed in 30%-40% less time with many less workers. A trend is to build the foundation with concrete and steel for maximum strength and then switch to timber as you go up the building.

I wondered about elements such as earthquake resistance, weather or fire. Supposedly there is testing now in California to see how the structures will withstand a shake test. As for fire resistance, the designers have incorporated a higher fire rated drywall and by not leaving the timber exposed, will reduce the exposure to fire. As for weather, they are not recommending using timber in locations of heavy rainfall. Like we saw earlier this year when a building collapsed on the coast of Florida, weather can be a factor for a high rise building over time. I believe the overriding message in both articles in this newsletter is that change is inevitable. Steel manufacturers are trying to build a more sustainable, less polluting brand of steel. The construction industry is also trying to build a better way in the construction of high rises. Change is a process. At first, it seems hard to understand, perhaps unusual – but that is how things change. It starts with someone having the courage not to just say why, but why not?

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## ANNIVERSARY

By Jim Stavits

Founded in 1988, Paragon Steel built the company on a simple idea – ‘Providing a higher level of quality and service’. It sounds simple, but back then the concept of service was not really a part of the buying nomenclature. It was all



34 YEARS

con't inside

con't from front panel

about low price, price, price. For some companies, it still is. Paragon Steel found a core of customers who understand the value in good service. We built our company servicing those accounts.

Through the years we've had to up the ante on what exceptional service looks like as many of our competitors have realized there is something in it. We're proud of how the concept of service has been incorporating into the steel users purchasing lexicon. We know that one distributor's steel may be equal to another's — but the difference may lie in which distributor does a better job in servicing their customers. If this sounds inviting to you, we welcome the opportunity to service your needs!

This newsletter is dedicated to the decarbonization of steel and the changing environment for steel in the world today. Recently Nucor Steel made a \$2.7 billion investment in West Virginia to build a new steel mill. The mill is being built in a state that prides itself in being a coal provider — not clean energy. Steel, once thought of as a contributor to threats on the environment is now the cornerstone of the green economy. It goes into everything from wind turbines to solar farms to electric vehicles. But steelmaking is



Image credit: Times West Virginian

a carbon intensive pursuit, and the industry is trying to reduce its CO2 emissions. The measures include using recycled scrap and renewable energy to power the plants. The most significant move would be to use clean hydrogen and less coal to make steel.

The West Virginia plant which will employ 800 people is set to be operating in 2024 and will be the cleanest mill in the country. Nucor is proud to say that its carbon intensity is less than one-third of today's steelmaking average. They say that it is committed to reducing CO2 levels by 35% by 2030 and beyond that being a net-zero manufacturer.

The steel sector today is responsible for as much as 7% of the globe's greenhouse gas emissions. However, a lot of time and money is going into making that steel using hydrogen — not coal. Nucor wants to be a leader in this transformation process. The target audience is the automotive, construction and renewable industries. Today, natural gas reforming is used to make 95% of all hydrogen. The goal though, is to create it from renewables using water electrolysis that splits the hydrogen and oxygen. This so-called green hydrogen produces no pollution. This is the goal, and it is happening in coal country — West Virginia.

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