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STEEL: THE CLEAR CUT ALTERNATIVE FOR BUILDING HOMES

Steel: growing popularity in residential construction

For reasons of strength, durability, versatility and economy, steel is a universal building material. The superstructures of skyscrapers, bridges, high-rise apartments and commercial buildings and offices are built with steel. The proven performance and quality of steel have also caused it to dominate commercial interior wall framing applications for many years now. Today, an increasing number of builders have discovered lightweight steel framing to construct homes, and are doing so with great success. Steel's sudden growth in residential popularity has been fueled by both economic and environmental considerations in the building industry. Wood has been the material builders traditionally used to construct residential homes in North America. But as a result of more than 90 percent of North America's old-growth forests already being harvested, wood's cost has increased while its overall quality and availability have dwindled. Wood remains an important material for contractors, but steel offers many construction, as well as environmental benefits. Steel is lightweight, cost effective, easy to use, recycled and recyclable.

Steel: reaping benefits for builders and homeowners

Steel framing is easy to handle on-site. It is light in weight because steel has the highest strength-to-weight ratio of any construction material, resulting in the use of less framing material compared to wood for an equal size structure. Steel framing is cost effective. It can be purchased to specific lengths, minimizing jobsite scrap. Steel does not twist, warp or split, so there is no need to sort out poor quality product, which saves time and money. An average 2,000 square foot steel framed house can generate as little as a cubic yard of recyclable scrap. Builders reduce their disposal costs, and divert material from local landfills. More builders are taking advantage of panelizing: either building or purchasing pre-assembled wall, floor and truss components. Steel's consistent quality and dimensional stability enhance efficiency in-plant or at the jobsite. Panelizing helps speed the framing process for the builder. Steel is noncombustible, performs well in high wind and seismic areas, and resists corrosion. It doesn't shrink or swell with time or humidity changes, so steel framing contributes to better drywall and exterior appearance, as well as the fit of doors and windows.

Steel: framing a new dimension of environmental benefits

All steel products, including steel framing, contain recycled steel. Steel framing contains at least 28 percent recycled steel and is completely recyclable. Using recycled steel takes the pressure off renewable resources: a typical 2000-square-foot home requires about 40 to 50 trees, about an acre's worth. With steel, only the equivalent of about six scrapped automobiles are needed. In contrast to many other building materials, steel is routinely collected in aggregate quantities from construction and demolition sites and recycled into new steel products. At the end of a steel-framed home's useful life, the steel components would also be recyclable. Framing with steel as a material consumes only 6.25 percent of the total life-cycle energy used by a home; the balance is consumed by heating and cooling, food refrigeration and lighting. Thermal barrier insulating materials provide exceptional heat and cooling loss protection to steel-built homes. Additionally, steel framing results in less air loss around windows and doors as well as foundation and roofing connections.

About steel recycling

Steel has long been North America's most recycled material. For the steel industry, using old steel products and other forms of ferrous scrap to produce new steel lowers a variety of steelmaking costs and reduces the amount of energy used in the process by 75 percent. That's why more than 65 million tons of steel scrap are recycled each year. In fact, more steel is recycled than paper, aluminum, glass and plastic combined. As an end result, recycling steel scrap also saves landfill space and natural resources.Steel construction materials, like other steel products, are a part of the steel industry's massive recycling efforts. When these steel products have outlived their useful lives, they can be recycled into new steel. What's more, all new steel made in North America contains recycled steel. Sections of steel framing may have once been a part of an automobile, refrigerator or soup can. Choosing steel framing means buying and using a product that contains recycled steel.

About the Steel Recycling Institute

The Steel Recycling Institute (SRI), a unit of the American Iron & Steel Institute, educates the solid waste management industry, government, business and ultimately the consumer about the economic and environmental benefits of recycling steel. Trough its four regional offices, SRI works to ensure the continuing development of the steel recycling infrastructure.

For additional information about steel recycling, visit the Steel Recycling Institute's website at www.recycle-steel.org.