



**DESIGN FREEDOM -
DURABILITY - LIGHT
WEIGHT - SUSTAINABLE**

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ArcelorMittal Dofasco Steel Design, Spring
2012)



Steel for Green Building Solutions

As society mobilizes to reduce our ecological footprint, pressure is building up on the construction industry to increase its contribution to environmental sustainability. And for good reason, since it has been calculated that by 2050, energy savings in construction could easily have a greater impact on global CO₂ emissions than the combined environmental efforts of the entire transportation sector. As a major supplier, ArcelorMittal is determined to play a key role in the 'green revolution' in the building industry.



Over the years, ArcelorMittal has continued to reduce the ecological impact of its steel manufacturing processes by drastically restricting waste generation, water use, greenhouse gas emissions and energy use. For example, ArcelorMittal has dropped its CO₂ emissions by more than 20% since 1990.

ArcelorMittal is making a substantial contribution to the development of breakthrough technologies designed to reduce CO₂ emissions from steelmaking by 30-70 % by 2050.

Focusing on the use phase of buildings

The amount of energy required for lighting, heating and air conditioning a building over time far exceeds the energy used to build it. That is why ArcelorMittal is now concentrating on new technical solutions for reducing energy use over a building's lifetime.

A high portion of energy use is devoted to heat control, by artificially heating or cooling the building. The combination of a steel structure with insulation drastically reduces energy losses. Combined with double skin systems and/or sandwich panels with pre-painted technology, it is possible to create a thermally

efficient envelope, meeting the strictest energy standards. In addition, the outstanding air tightness of steel cladding and roofing systems eliminates air leakage that contributes to energy waste.

Steel makes it much easier to adapt buildings to new and innovative uses. A steel building characterized by the absence of load bearing walls is intrinsically more versatile and flexible than other types of structure. With its prefabricated, lightweight and fast-to-erect components, steel construction means buildings can easily be updated to new construction standards. Steel gives buildings a longer, healthier life. In other words: it helps the construction industry to pursue sustainability.

From ArcelorMittal Update May 2010.

