

editor's note



JUST TWO YEARS BEFORE I WAS BORN, THE FIRST PACEMAKER WAS IMPLANTED IN A PERSON. It lasted less than a day; the patient survived, however, and during the next 42 years received 25 more pacemakers.

Those early devices were larger than a hockey puck and needed to have their batteries recharged almost daily. In contrast, the device recently inserted in my chest is smaller than a Peppermint Patty, is both a pacemaker and a defibrillator, and has a battery designed to last five to 10 years.

The medical field is awash in stories of technological advances, so much so that we often take them for granted. In contrast, the construction industry is often considered an old, staid industry where nothing much changes. But while the framework for construction has remained constant (a mason in Amsterdam 200 years ago would be comfortable working on a brick house today), there are notable areas of advancement.

Starting with the steel mills, we've moved from requiring more than 11 man hours to produce a ton of steel to around three-fifths of an hour. At the same time, we've reduced greenhouse gas emissions by nearly 60% and substantially cut energy consumption. In the old movie *Flashdance*, the mill was crowded with people bustling around. As more than 100 people learned on recent tours of mills during this year's SteelDay, our modern mills are marvels of automation staffed by highly skilled technicians (though I've yet to see a dancing welder; the closest would be the singing designer in the fabulous YouTube video at http://youtu.be/ruDX_tt8GPY).

Every design engineer is familiar with the advancements made in software technology, and these same advancements hold true for detailing and fabrication. While just a few decades ago shop drawings were painstakingly and artistically handcrafted, today amazing 3D illustrations (including every bolt hole) are spit out by computers that can make changes in the blink of an eye. Even more amazing is the use of CNC equipment, which allows these advanced drawings to be directly used by machines to precisely cut and fasten steel. If you missed visiting a modern fabrication shop last month on SteelDay, consider attending NASCC: The Steel Conference in St. Louis this coming April. In addition to more than 100 technical sessions on everything from structural engineering to shop safety, the conference features an extensive trade show where many vendors bring—and operate—their latest equipment.

So stop thinking about the steel construction industry as a staid, old workhorse and instead envision it as it really is today: active, vibrant and rapidly advancing. MSC

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