



2005

# hot products

Machinery, software, tools and materials are the steel industry's most important accessories—and innovation among these products can mean faster, more cost-effective steel design and construction. This year's Hot Products award winners are just a sample of some of the creative solutions recently introduced for designers, detailers, fabricators, and erectors. Some offer advanced technology; others provide simple and practical applications in response to common problems. But all stand out as novel approaches to on-the-job difficulties.

Products were awarded prizes in the following categories: coatings; safety equipment; engineering and detailing software; project management software; fabrication equipment; and erection equipment. The number of "Hot Products" and "Honorable Mentions" awarded was not limited by category. The awards are based on descriptions and claims by the manufacturers; no product testing or evaluation was performed. These awards do not constitute a product endorsement by *Modern Steel Construction* or by AISC. AISC products were not eligible for awards. Only submitted products were considered.



## Category: Project Management Software

### Hot Product

#### Tekla Structures—Project Manager 11.0

Tekla Structures—Project Manager consolidates multiple sources of project status data into a visual 3D model. Utilizing Tekla Structures' vast import/export capabilities, Project Manager can add critical schedule, status, RFI, and coordination information from other CAD or information sources.

Using intelligent filter functionality, a Tekla Structures—Project Manager user can visually peel away an entire building model to reveal a specific piece of information. Once the scope of certain information is identified (i.e. items impacted by RFI, items to be shipped today, items erected), Tekla Structures' flexible reporting can extract user-defined information for assessment and coordination among other construction project team members.

Contact: Tekla, Inc., ph. 770.426.5105, [www.tekla.com](http://www.tekla.com)

No.	Ref.Mk.	Size	Grade	Length	Weight (lbs)
1	W12X99	A36	18'-10 1/2"/14	824	
3	W10X45	A36	14'-10 1/2"/8	674	
1	W10X45	A36	14'-10 1/2"/8	673	
1	W10X45	A36	15'-2 1/2"/8	550	
1	W10X45	A36	4'-10 1/2"/8	221	
4	W10X19	A36	3'-13 1/2"/8	75	
1	C12X16	A36	20'-0 1/2"/8	2831	
4	L4X3-1/2X3/8	A36	11'-2 1/2"/2	9	
4	L4X3-1/2X3/8	A36	8'-1 1/2"/2	6	
4	PL3/8x8	A36	8'-1 1/2"/4	6	
4	PL3/8x8	A36	8'-1 1/2"/2	3	
Total for 34 members:					7304



### Honorable Mention

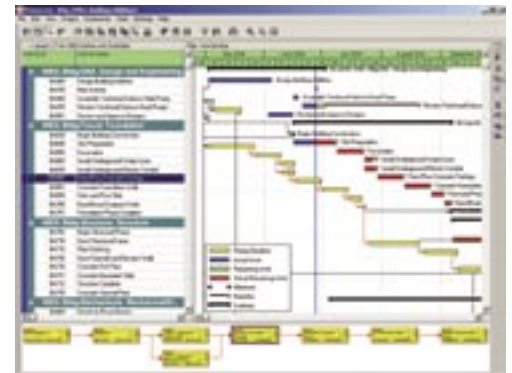
#### Primavera® Contractor

Primavera® Contractor improves coordination between contractors and subcontractors. Contractor is the only single-project planning and scheduling software solution built specifically for the construction industry. Primavera Contractor makes it possible for the entire project team—from the general contractor through the subcontractors—to work together on a single, consolidated master schedule by providing timely status updates and change notification. Productivity is increased through better coordination and synchronization between contractors and subcontractors and through improved scheduling of crews, material deliveries, and equipment availability.

Many organizations that have adopted Primavera Contractor are recommending its use among their entire subcontractor and consultant base in order to quickly receive the most up-to-date cost-loaded schedules. This ensures that the general contractor has the most accurate program information possible while helping subs to be more productive by using a faster process. Aside from the value of increased productivity levels and faster, more comprehensive schedule updates, small and mid-sized contractors and subcontractors are able to have direct coordination with the general contractor's master schedule using Primavera Contractor.

Contractor is an affordable solution for organizations that want to use Primavera products to improve their project management processes but may not have the resources or project management maturity for more robust systems.

Contact: Primavera Systems, Inc., ph. 610.667.8600, [www.primavera.com](http://www.primavera.com)



Category: **Safety Equipment**  
**Honorable Mention**

**Miller Revolution Harness**

The Miller Revolution Harness has redefined the full-body harness to meet the needs of workers. The new, patent-pending PivotLink™ Connection rotates with workers—no more pulling or tugging on the shoulders and neck. It's the perfect connection point for a tool belt, water bottle, or tool storage pouch.

Revolution's modular integrated accessory system creates a convenient and comfortable way to snap on and snap off belts, tools, and accessories. And it's evenly distributed across the hips and shoulders for greater comfort and utility.

With the latest patent-pending cam buckle technology, workers find one simple adjustment simultaneously configures the fit for both shoulder straps and won't slip or require constant readjustment.

The new ErgoArmor™ Back Shield prevents workers from being struck in the back by snap hooks and retractables and provides flexible space-age materials that breathe for greater comfort and mobility.

New patent-pending DualTech™ Webbing makes donning a harness easier than ever. Shape retention memory and two-sided texture and color design combine softness and chemical-resistant durability into a harness that provides patent-pending, clip-on web finials that secure and organize loose webbing, making harness adjustment simple.

**Contact: Miller Fall Protection (a Bacou-Dalloz company), ph. 401.223.0333, www.bacou-dalloz.com**



Category: **Coatings**  
**Honorable Mention**

**Galoseal WB Galvanized Metal Bonding Primer**

Galoseal WB is a new, innovative bonding primer for galvanized metal. The primer creates a tenacious bond that enhances topcoat adhesion to galvanizing and other non-ferrous substrates. Topcoating of galvanizing (particularly new galvanizing) is problematic, stemming from surface treatments such as oils, chromates, and other chemical solutions. Earlier primers would often show good initial adhesion only to delaminate under freeze-thaw cycling. Galoseal WB eliminates these problems.

Years ago, the polyvinyl butyral wash primers were often used to "etch" the galvanizing (through the use of a mineral acid) and thus created, for the most part, a suitable surface on which to overcoat.



Their sporadic performance and the onset of VOC restrictions have all but eliminated their use. Recent polymer advances formulated into Galoseal WB have resulted in significant improvements in performance of coating systems and adhesion of topcoats. Its many attributes include a unique water-based acrylic bonding primer, 60 minute dry-to-topcoat time, an absence of heavy metals or mineral acids, extended recoat times, the ability to topcoat with two-component finishes, and low VOC.

**Contact: Carboline Company, ph. 314.644.1000, www.carboline.com**



Category:  
**Erection Equipment**

**Hot Product**

**The Connector**

The Connector™, a material handling apparatus, reduces the risk of ironworker accidents while unhooking structural steel or bar joists in the air. Designed with safety and productivity in mind, the Connector was specifically developed to protect overhead ironworkers, as well as workers down below. The unique patented design of the unit assures the safest material handling available today. By using the Connector, erectors can reduce their workers' comp premiums and recover productivity losses resulting from OSHA 1926.

The below-the-hook lifting apparatus is a self-contained, battery operated, hydraulic unit that securely grabs suspended steel and safely delivers to the bolt-up location. Unlike chokers and slings, the load can be rigged "off center" and can be safely transported without fear of load slippage. Case-hardened steel jaws and powerful hydraulic rams in the grabbing mechanism prevent lateral slippage of the load, certified to 9,000 lb lateral pull.

Remote controls at the destination permit safe unhooking from the load, eliminating manual unhooking of slings and chokers and saving precious time.

The Connector, certified to 57,000 lb, with a safe working load of 36,600 lb, has a fail-safe system in place—even if the hydraulic lines are cut, the load stays clamped securely in place.

**Contact: The Connector, LLC, ph. 813.765.4225, www.SteelErectionSafety.com**





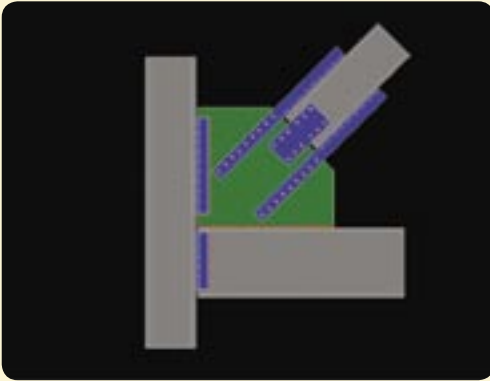
Category:  
**Engineering and Detailing Software**

### Hot Product

#### RAM Connection 3.0

RAM Connection analyzes and designs steel connections based on AISC ASD 9th Edition and AISC LRFD 3rd Edition. It can be used as a stand-alone tool or fully integrated with the RAM Structural System and/or RAM Advanse. The engineer can design, check, and optimize steel shear, moment, splice, cap plate, bracket, and—new in v3.0—gusset plate connections. The engineer can obtain thorough reports of connection calculations, a list of parts for the connections, and—also new in v3.0—DXF files with fully detailed connections.

The engineer can design or check connections in minutes and also customize the software to include office



standards, rules of thumb, or connection expertise into the connection design. If used with its seamless integration, all data regarding member sizes, joint geometry, and forces are transferred directly from the RAM Structural System or RAM Advanse into RAM Connection.

Connections are designed in a full 3D environment with any changes graphically reflected immediately. The engineer can design/check one connection at a time or several connections in a building at once, including the ability to group designs for economic designs in a project.

Among v3.0's main new features are gusset plate design and a 2D drawing of each connection, including different views and an option to enter or edit data directly in the drawing. A DXF output is also available.

Gusset plate design is available for all bracing configurations including chevron (V and inverted V), K, and typical beam-column connections. Connections of all brace section types are supported including W, WT, L, C, and HSS shapes. The brace to gusset connection may consist of angles, splice plates, bolts, and/or direct welds.

**Contact: RAM International, ph. 760.431.3610,  
www.ramint.com**

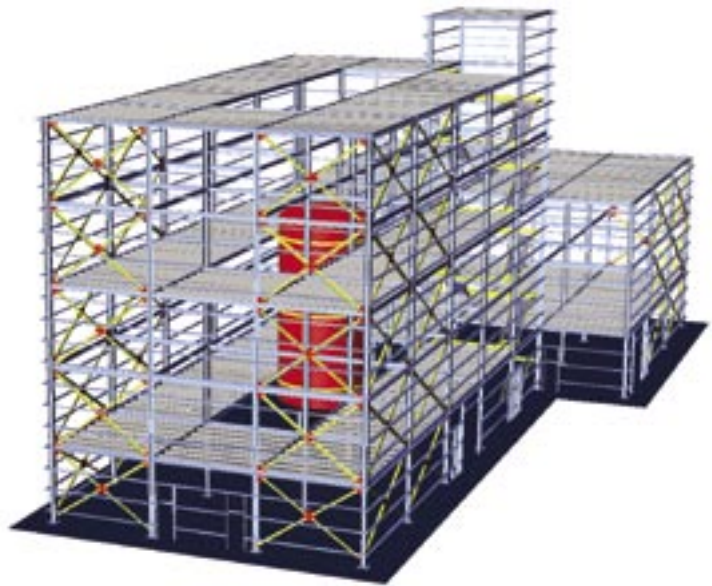
### Honorable Mention

#### ProSteel 3D StrucLink

ProSteel 3D StrucLink is a bi-directional seamless interface that manages the flow of data between CAD models and analysis software. The exchange process can be initiated either from the ProSteel 3D, AutoCAD-based software, or analysis programs. StrucLink is unique because of its ability to update the CAD or analysis model, as opposed to continuously recreating the model as in traditional methods of data exchange.

This revolutionary technology allows engineers to communicate designs directly and repetitively with the CAD department while maintaining data integrity within the model at all times by both disciplines. StrucLink allows engineers to make design changes continuously without disrupting project schedules. The structural design engineer and the draftsman responsible for drawing production both benefit by sharing designs and eliminating costly rework.

StrucLink is compatible with SAP2000, ETABS, S-Frame, RISA-3D, Robot Millennium, Multiframe, and Limcon for connection design.



**Contact: StrucSoft Solutions, Inc., ph. 514.341.2028,  
www.strucsoftsolutions.com**



Category: **Fabrication Equipment**



### Hot Product

#### Type B 251 Plate Processing Center

The Ficep Type B 251 Plate Processing Center not only punches, drills, and cuts plates up to 8' in width and 4" in thickness, but it also has many additional required applications that today's fabricators need to remain competitive in the marketplace.

The Type B 251 features a high performance machining spindle in addition to the capabilities of punching and cutting with either plasma or oxy-fuel. This spindle features speeds of up to 3,000 rpm for drilling rates of up to 30" per minute, tapping, countersinking, milling, and the generation of weld prep edges for full penetration welds.

The high speed punching head also generates up to 100 holes per minute on 1" centers. Up to 14 different tools can be automatically changed by program command, which makes nesting of different parts in an 8'-wide plate ideal to maximize material utilization.

A rack and pinion material positioning system holds parts accuracies of .015" or less in plates up to 65' in length, regardless of the stock plate's edge condition or straightness.

**Contact: Ficep Corporation, ph. 410.588.5800, [www.ficepcorp.com](http://www.ficepcorp.com)**

### Hot Product

#### DGP Miter Series Band Saw

Peddinghaus's engineering staff has designed a new patented band saw that virtually eliminates scrap while cutting heavy structural sections in seconds, not minutes.

The new DGP series band saws from Peddinghaus carry a patented "pivot from above" portal design that enables only the saw head to move into position. Thus, miter cuts up to 60 degrees right and left are easily achieved. Movable material clamp vises work with a lifting/lowering conveyor track to ensure rigid clamping at the saw blade, which translates into high performance cutting.

The Peddinghaus patented "pivot from above" design is also environmentally friendly, as all chips and coolant are isolated from the saw head assembly. A new coolant mist system can be employed, which eliminates costly flood coolant residue and disposal problems.

The biggest saw blade motor (20 HP) and gearbox in the industry power the biggest, toughest blade (2 5/8" x .063") to provide chip removal rates in excess of 22.5 IPM. In the real world, fabricators using the DGP band saw report cutting 12 more beams per hour. This outstanding productivity helps keep steel construction strong against concrete alternatives, as deadlines can be met and exceeded.



**Contact: Peddinghaus Corporation, ph. 815.937.3800, [www.peddinghaus.com](http://www.peddinghaus.com)**

## Category: **Fabrication Equipment**

### **Honorable Mention**

#### **V550 Plate and Angle Processing Line**

The V550 Plate and Angle Processing Line can process flat bar up to 20" x 1" and angle up to 8" x 8" x 5/8". The punching unit can be supplied with up to 10 punches and 20 dies, which eliminates the requirement of a die change when processing material with different thicknesses. An integral marking system is provided for part identification and is positioned below the pass line. A drilling head can be provided with a tool changer with seven stations. This allows the system to drill, tap, and countersink in conjunction with the punching facility.

The shearing of material is performed by two shears, one for flat and one for angle material. The shears shuttle into position by program command. The flat shear also can rotate 45 degrees in either direction to perform miter cuts. The material is automatically measured prior to entering the machine. Based upon the stock length, the software automatically nests the parts. If a remnant exists, it is removed from the machine automatically and returned to stock.

Punching capacity is 110 tons, shearing capacity is 265 tons, drilling capability is up to 1 9/16" dia., and tapping capability is up to 1". Automatic loading and unloading can be incorporated to reduce the labor requirement. The CAD/CAM, DSTV interface is standard. The control is a PC running on Windows XP.

**Contact: Voortman USA Corporation, ph. 815.935.3010, [www.voortmancorp.com](http://www.voortmancorp.com)**



### **Honorable Mention**

#### **Ocean Avenger CNC Beam Drill Line**

The new 2005 Ocean Avenger is the world's fastest-selling beam line, with over 35 machines installed since its release in November 2004.

At \$149,000, the Ocean Avenger is the newest and most affordable CNC beam line built specifically for the small to medium-sized fabricator. The ability to handle any steel profile and even the heaviest jumbo beams allows the smaller fabricator to bid on types of work that he would normally pass on. This beam line dramatically reduces the fabricator's processing costs and increases the type of work he can handle.

This versatile machine processes beams, channel, angle, tube, and plate. It sells for less than half the cost of a regular beam line and occupies less than half the floor space. It eliminates all manual layout and accurately drills beams at over 250 holes per hour. This versatile machine processes webs up to 40", any size flange, and thicknesses up to 10".

The Avenger utilizes an optical sensor to detect the zero reference of the part to be drilled. It also uses a through-the-tool coolant, enabling it to drill steel thicknesses up to 6". A web probe with a built-in air blaster detects the web centerline for accurate flange drilling.

The Avenger can be programmed directly from your detailer's drawings and integrates seamlessly with major detailing packages. It is manufactured in the U.S. by Peddinghaus and utilizes off-the-shelf parts, including the reliable Siemens CNC control. With over 130 single-spindle machines installed in the U.S. in the past 36 months, Ocean Machinery is changing the way smaller fabricators process steel.

**Contact: Ocean Machinery, Inc., ph. 800.286.3624, [www.oceanavenger.com](http://www.oceanavenger.com)**



### **Honorable Mention**

#### **WA-5000 Portable Magnetic Base Automatic Drill**

Nitto Kohki's new WA-5000 Portable Magnetic Base Automatic Drill is taking over the automatic world with its 3"-deep hole-boring capacity. The WA-5000 portable automatic drill has 2" diameter by 3" depth capacity. Aside from the other automatic-feed magnetic base drills Nitto Kohki has offered to the steel fabrication market in the past 20 years, the WA-5000 has larger capacity than ever at an attractive and affordable price.

Nitto Kohki's cost-saving automatic-feed machines are revolutionizing the hole cutting process. All of our automatic-feed machines are equipped with a cutting load sensor and feed load

sensor to maximize cutting production while extending cutter life.

These machines are also equipped with a motion sensor and non-restart sensor for maximum safety. Specially coupled with JetBroach carbide-tipped high efficiency annular cutters, Nitto Kohki's magnetic base drills are among the safest drills available on the market today.

The new WA-5000 will save time, money, and energy. With its advanced technology and carbide-tipped annular cutters, the WA-5000 portable automatic drilling machine easily outperforms older style magnet drills and high speed steel annular cutters. Productivity can be increased by 300%.

**Contact: Nitto Kohki U.S.A., Inc., ph. 630.924.9393, [www.nitkokohki.com](http://www.nitkokohki.com)**

