

# 2004 **Editors' Choice** **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 Editors' Choice 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 software; fabrication, detailing and project management software; and fabrication 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: **Coatings**

## **HOT PRODUCT**

### **CAFCO SprayFilm – WB 4 Intumescent Fire Protection Coating** Introduced: December 2003



CAFCO SprayFilm – WB 4 Intumescent Fire Protection Coating is the first water-based thin-film intumescent fire-protection coating for structural steel approved by Underwriters Laboratories, Inc. (UL). SprayFilm – WB 4 does not require any reinforcement (i.e. glass fiber mesh and/or adhesive basecoats). It is an environmentally safe and user-friendly product, without the concerns associated with solvent-based products.

The SprayFilm product successfully completed an extensive blast over-pressure program conducted by Advantica Technology at its Spaeadam Test Facility in Cumbria, UK, and witnessed by Lloyd's Register. Steel columns protected with SprayFilm were installed in the vented opening frame of the natural-gas explosion chamber and exposed to an overpressure explosion on 1.9 bar. Upon inspection, the SprayFilm intumescent coating showed no signs of damage and remained intact. Further, the tested columns were exposed to a hydrocarbon fire to insure that the fire-resistive properties remained unaffected.

**Contact: Isolatek International, ph: 800.631.9600, [www.cafco.com](http://www.cafco.com)**

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

### **Steel Spec™ Epoxy Primer** Introduced: January 1, 2003

Sherwin-Williams Industrial and Marine Coatings Steel Spec™ Epoxy Primer is the first non-zinc containing coating to be Class-B rated for slip coefficient performance for bolted connections per ASTM and AISC specifications. The no-lead coating eliminates zinc-dust mixing issues, including the need for continuous agitation. It accepts a wider variety of topcoats than zinc coatings, and offers better predictability when top coating. Steel Spec Epoxy Primer also eliminates the need to mist coat before primer application and to mask faying areas before intermediate-coat application, saving labor.

Steel Spec Epoxy Primer meets OSHA slip requirements and is approved for use in USDA-inspected facilities. The coating can be applied by brush, roller or airless spray at temperatures as low as 35°F. It dries to touch in 15 minutes and can be recoated with a variety of solvent-borne or water-based topcoats in just two hours. Steel Spec Epoxy Primer is ideal for marine, bridge and heavy-duty industrial applications.

**Contact: The Sherwin-Williams Company, ph: 800.524.8979, [www.sherwin-williams.com](http://www.sherwin-williams.com)**



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

### **DBI/SALA and PROTECTA: Rebel Self-Retracting Lifeline** Introduced: January 2004

Protecta's Rebel is a light and compact self-retracting lifeline (SRL), weighing only 2.8 lb. The 11' of retractable line delivers an excellent working range for economy class SRL's. The Rebel's price point is under \$100. It can be used in applications where, in the past, only conventional lanyards were used.



The retractable technology of the SRL stops falls quickly and reduces the impact forces to which workers are exposed. In addition, the 11' length of the Rebel nearly doubles the working area of a lanyard without reconnection. Its aluminum housing can withstand rough use, and thin webbing enables a compact size. The Rebel™ CT is a cable version of this compact SRL technology. Designed for rugged applications, this SRL supplies a full 11' of cable line in a durable unit that weighs only 5.2 lbs.

**Contact: DBI/SALA and PROTECTA,  
ph: 800.328.6146, [www.dbisala.com](http://www.dbisala.com)**



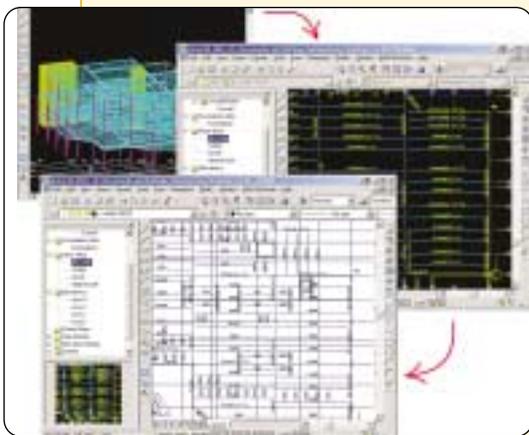
Category:  
**Engineering Software**

## HOT PRODUCT

### RAM CADstudio

Introduced: April 2004

RAM CADstudio works inside AutoCAD to streamline the generation, coordination and review of construction drawings. RAM CADstudio provides the "missing link" between engineer and CAD specialist by creating a continuous electronic flow of information between the engineers' analytical/design model and CAD drawings.



The engineer first creates a RAM Structural System model and imports it into RAM CADstudio for preliminary drawing creation. The CAD specialist can update the drawings, adding details, making partial plans, placing text in the desired locations, and more, with CADstudio's advanced file navigator and drag-and-drop capabilities. The drawings can be modified using standard AutoCAD commands and custom LISP routines.

As the project progresses, the link between RAM Structural System and RAM CADstudio automatically updates the drawings based on any structural changes, while maintaining the modifications made by the CAD specialist. All of the changes are updated on the AutoCAD sheets used for printing. Reports track project changes and identify to both engineer and CAD specialist the differences between the analytical model and the CAD model. The result: no redlining, faster drawing review, and minimal errors.

In addition to 2D drawings, RAM CADstudio maintains a 3D structural model, so engineers can more directly communicate with architects using systems like Architectural Desktop. In addition, RAM CADstudio is expected to provide a useful CIS/2 link for EDI with detailing and fabrication software.

**Contact: RAM International,**  
ph: 760.431.3610, [www.ramint.com](http://www.ramint.com)

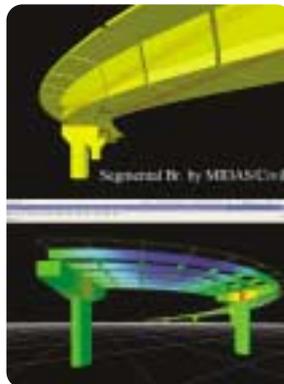
Category: **Engineering Software**

## Honorable Mention

### MIDAS/Civil — Bridge Analysis and Design Software

Introduced: January 2003; Major Upgrade March, 2004

MIDAS/Civil analyzes and designs Bridge Structures in 3-D environments plus the time dimension. It covers all bridge types; curved steel girders, composite, segmental post-tensioning



(incremental launching, balanced cantilever & movable scaffolding), suspension, cable-stayed, slab, frame and culvert bridges. It generates comprehensive traffic loads to AASHTO Standard and LRFD specifications, CSA-S6-00, BS5400, etc. through influence lines and surfaces. Steel and reinforced concrete design also is provided.

A "Works Tree" lists a summary of the model data systematically, so the user can display, activate, modify and enter any data at any time, in any sequence. Models can be created through "Drag and Drop." All the results can be animated, which visually provides the structural behaviors. This software thus speeds up the analysis and design cycle.

MIDAS/Civil simulates the construction stages of a structure. Each stage is represented by a structure, supports and loadings, reflecting time-dependent effects such as creep, shrinkage, modulus of elasticity, prestress losses, composite action and heat of hydration. MIDAS/Civil eliminates the need to switch software for different bridge types.

**Contact: MIDASoft Inc., ph: 281.920.9958,**  
[www.MidasUser.com](http://www.MidasUser.com)

## Honorable Mention

### Structural Desktop, Version 1.95

Introduced: January 2004

Structural Desktop (SDT) runs inside AutoCAD. Draw lines in AutoCAD; SDT converts them to standard shapes in steel, concrete, or wood. SDT writes geometric data files for: STAAD.Pro, GT STRUDL, RISA 3D, and SAP2000. Analyze the file in these programs and make changes; SDT reads the result and creates 100% AutoCAD DWG drawings and Material Reports for contract documents. SDT has a right-click interface; tapered and light-gage members; automated standard steel libraries by country; concrete double Ts; CIS/2 compatibility through the analytical package; correctly dimensioned outlines for structural details; and 3D models for rendering or animation. Version 1.95 has international tables and metric values.

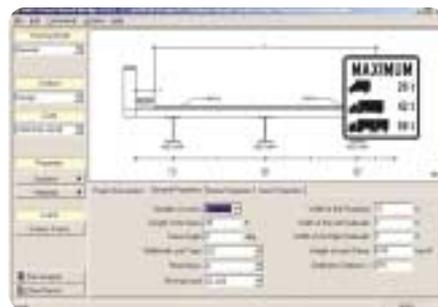
**Contact: Structural Desktop, Inc., ph: 479.471.5227, [www.structuraldesktop.com](http://www.structuraldesktop.com)**

## Honorable Mention

### SAFI Steel-Wood Bridge

Introduced: June 2003

SAFI Steel-Wood Bridge is an automated program for the design, evaluation and rating of steel girder bridges with wood decks. The program can analyze one and two lanes of straight or skew bridges using standard and parametric section shapes subjected to standard or custom moving loads. The program selects optimal section shapes or calculates the resistance of steel beams of known dimensions. The resistance of wood elements also can be calculated for common or user-defined wood grades.



Typical default parameters can be specified to increase the efficiency of design or evaluation procedures. Bridge rating and posting features also are provided. Results are presented on screen or with a Microsoft Word-compatible format. The program complies with Windows 9x/Me/NT/2000/XP.

The Steel-Wood Bridge Software incorporates advanced design and evaluation techniques to design a new bridge or rate and rehabilitate an existing one. It is highly automated and can be used by professionals with different levels of expertise. Metric and imperial units are supported, and the program is multi-lingual.

**Contact: SAFI Quality Software Inc.,**  
ph: 800.810.9454, [www.safi.com](http://www.safi.com)



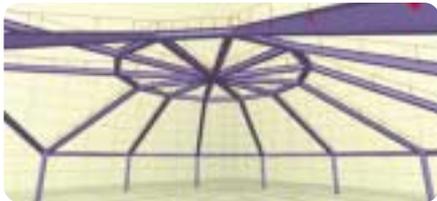
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Category:

## Engineering Software Honorable Mention

### Dr. Frame3D v 1.0

Introduced: November, 2003



Dr. Frame3D, available for PC and Macintosh, offers direct-manipulation analysis in 3D. Users can manipulate modeling components (loads, supports, members, etc.) while the structure's behavior is updated continuously on screen. Dr. Frame3D hides the complexity of number-crunching functions, so the designer can focus on model behavior. The software combines model definition, model analysis and results generation. This allows designers to try out "what if" scenarios in minutes. Models can be modified on the fly and behavior is represented accurately via visual and numeric feedback.

**Contact: Dr. Software, LLC,  
ph: 206.930.5828, www.drframe.com**

## Honorable Mention

### ERITower v3.0

Introduced: January, 2004 (upgrade)



C-Concepts ERITower is an analysis and design tool for telecommunications towers. It automates the analysis and design required to meet the TIA/EIA-222-Standards (222-A through 222-G). ERITower uses True Cable technology, which determines cable forces with a multiple-pass

re-tensioning technique. The program can analyze and design three- and four-sided guyed towers, three- and four-sided self-supporting towers, round or tapered monopoles and guyed monopoles. Linear and non-linear analyses determine displacements and forces. Wind pressures and forces are calculated automatically. Graphics plots include material take-off, plot plan, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots. Results are assembled as a Word report. SDNF export allows for transferring data to steel detailing software.

**Contact: C-Concepts, Inc.,  
ph: 262.252.3173, www.c-conceptsync.com**



Category:

## Fabrication, Detailing & Project Management Software HOT PRODUCT

### FabTrol MRP

Introduced: May 2004

Version 1.1 is the first major upgrade of FabTrol MRP, a steel-fabrication software. Like its predecessors, it offers fully integrated estimating, drawing management, material management, production management, and shipping. Based in Windows with optional support for SQL Server, FabTrol MRP is designed specifically to meet the needs of steel fabricators.

The latest release delivers several dozen notable enhancements. The purchasing, stock, and shipping modules now offer material traceability improvements, including new functionality for tracking country of origin and heat certs. The system's 300-plus reports now can be outputted as PDF files for easy e-mailing. A new XML-based export function collects material, production, and shipping-status information and makes it available to other software applications or custom-programming efforts. The drawing-management system can attach and view drawing images to each drawing revision and supports all available image formats. The accounting export function has been expanded, as has the system's change-order management functionality, which now supports multiple-document attachments and additional record tracking. Beyond the specific new features, this release also offers widespread usability and interface improvements to reduce learning time and improve productivity.



**Contact: FabTrol Systems, ph: 888.FABTROL, www.fabtrol.com**



## Hot Innovation: Robotics



The Kaltenbach KC1200 robotic coping machine (2003 Hot Product Honorable Mention) is one of a number of robotic fabrication machines that recently have been introduced to the steel-fabrication industry. Jesse Engineering's Robotic Series SHC-BC-R (next page) also uses a robot to precision-cut structural steel members.

The increased use of robotics in U.S. fabrication shops will depend on the greater use of electronic modeling and electronic data interchange (EDI) on the part of designers and fabricators.

"We haven't managed to bring robotics into structural steel fabrication due to structural steel's custom nature and sometimes lack of repetition, but its time is coming soon," said Tom Schlafly, AISC's Director of

Research. "We've been talking about using electronic models to trade design information for the last couple of years, and we're extending electronic information into the shop. Robotics hasn't been part of the fabrication shops yet, because engineers, detailers and others do not send a high percentage of design models to the shops electronically. But as the percentage of work like that increases, robotics will make more sense. It is the future."

The KC1200 (pictured above) is an eight-axis robotic structural coping machine, capable of producing 3-D copes (including weld prep). It can download information directly from detailing software with a DSIV interface and produce copes without any manual intervention. It incorporates laser-offset calibration and automatically handles short material lengths. Since its inception, additional software modules have been added, as well as an 8th CNC axis, which allows the KC1200 to create castellated beams and split Ts.

## Category: **Fabrication and Erection Equipment**

### **Honorable Mention**

#### **Compact HMD150 Portable Magnetic Drill**

Introduced: Spring 2003, upgrade of the Model HMD115 Truck Frame Drill

The HMD150 is designed to permit fabricators to make holes in places where other drills can't fit. This is useful for rehab projects or when installing retrofit equipment, and handy for when just a few holes are needed. Until now, when fabricators were faced with the problem of making holes in confined spaces, they would need to flame cut or punch them if possible. Because of its constant low profile, the HMD150 can fit in any space where its 7<sup>13</sup>/<sub>16</sub>" height will permit.



The drill cuts holes up to 1<sup>3</sup>/<sub>8</sub>" diameters through steel up to 1" thick—three times faster than conventional drills. The magnetic base has a 1,200-lb dead-lift rating on <sup>3</sup>/<sub>8</sub>" plate and 2,165 lb on 1" plate. It has a removable feed handle for ratcheting the feed in close quarters. It has a rigid quill-feed for maintaining a constant low profile (7<sup>13</sup>/<sub>16</sub>" high) and ergonomic rear controls. It uses Hougén RotaLoc Plus Annular Cutters with quick-release shanks, requiring no tools for cutter changes. The unit weighs 22.7 lb, and has an electrical rating of 120V, 50/60 Hz and 8-Amps.

**Contact: Hougén Manufacturing, Inc., ph: 810.635.7111, [www.hougen.com](http://www.hougen.com)**

### **Honorable Mention**

#### **1250AJP Ultra Boom**

Introduced: February 2004

The new Model 1250AJP Ultra Boom aerial work platform from JLG Industries, Inc. is an articulating and telescoping model with 63'-2" horizontal reach, 60'-7" up-and-over capability and 125' platform height. The JibPLUS® jib boom rotates both 130° vertically and 125° horizontally. When combined with the 180° platform rotation, it provides workers with maneuverability for reaching hard-to-access areas. Platform capacity in the majority of the work envelope is a restricted 1,000 lb (unrestricted is 500 lb). The machine includes JLG's QuikStik® boom that allows the platform to be lowered to the ground while the tower boom is fully extended. With this feature, workers can go from ground level to full elevation in 115 seconds. A standard feature of the Model 1250AJP is the SkyPower™ package, which includes a 7,500-watt generator that provides power to welders and other platform-mounted accessories.

**Contact: JLG, ph: 877.JLG.LIFT, [www.jlg.com](http://www.jlg.com)**



### **Honorable Mention**

#### **1101 DZ CNC Drilling Line**

Introduced: March 2004

Ficep's 1101 DZ CNC drilling line is the first CNC drill line in the market that uses a single spindle to automatically process both flanges and the web without any manual intervention, as the spindle rotates a full 180° in 0.7 seconds. This solution reduces the cost of such an acquisition by eliminating more than half the mechanical and electrical parts that are associated with a typical three-spindle drilling line. The elimination of most parts also adds to the system's simplicity and subsequent reliability.

The single spindle features a ball-screw feeding system in conjunction with a spindle drive to use today's carbide tooling. This combination delivers the ability to drill a 1" flange in as few as 3 seconds. The system is furnished with an automatic tool changer to accommodate differences in the required hole size, tapping, countersinking and milling when slotted holes are required.



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

### **Honorable Mention**

#### **Robotic Series SHC-BC-R Saddle and Hole Cutting/Beam Channel Profile Line**

Introduced: February 2004

The Robotic Series SHC-BC-R was developed with the use of a FANUC Robot for its precision and diversification. Jesse Engineering Company developed a 3D Visual system using an Industrial Color Touch Screen PC for defining the particular part to cut (PIPE). The machine can cut complex contours in pipe, and cut shapes such as structural beams and channel. Beams and channels can be cut to shape, straight cut-off, coped, beveled, and holes cut to most requirements. An integrated conveyor line can process beams, channel, or pipe in one line. Extra savings are in handling and maintenance.

**Contact: Jesse Engineering Company, ph: 253.922.7433, [www.JesseEngineering.com](http://www.JesseEngineering.com)**



# 2004 People's Choice hot products

As a warm-up to MSC's annual Editors' Choice Hot Products Competition, attendees at the 2004 NASCC in Long Beach, CA were invited to vote for People's Choice Awards. The votes were tallied, and the results are in! Products with the highest average scores were given a **Scorching**

rating, and products with the next highest scores were given an **Hot** rating. Products appear in no particular order. Don't miss your chance to participate—and cast your vote—at next year's NASCC in Montreal, April 6-9, 2005!

## scorching! → → → → → → → →

Kaltenbach

### HDM 1411 Circular Cold Saw

[www.kaltenbach.com](http://www.kaltenbach.com)

The Kaltenbach HDM 1411 Circular Cold Saw benefits structural steel fabricators and service centers with high throughput rates, and provides surface finish and squareness tolerances. With a 56"-diameter saw blade, the saw has the capacity to cut most wide-flange shapes.



SMI Steel Products

### SmartBeam®

[www.smisteelproducts.com](http://www.smisteelproducts.com)

Manufactured by SMI Steel Products, the SmartBeam® provides a cost-effective option for long-span floor or roof applications. Architecturally pleasing designs allow mechanical services to pass through the structure while reducing building heights. SMI Steel Products is part of the CMC Steel Group of Commercial Metals Company (NYSE:CMC) headquartered in Irving, TX.



Fabtrol

### FabTrol MRP

[www.fabtrol.com](http://www.fabtrol.com)

FabTrol MRP is estimating and production-control software for steel fabricators. Version 1.1 offers integrated estimating, drawing management, material nesting, purchasing, inventory control, production management, shipping, and more.

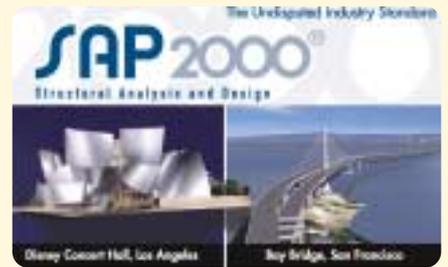
# FabTrol MRP

Computers & Structures, Inc.

[www.csiberkeley.com](http://www.csiberkeley.com)

### SAP2000

SAP2000 integrates the analysis and design of simple to complex structures in one program. Physical-object modeling, proprietary equation solvers and element types, nonlinear techniques for progressive collapse and buckling are all integrated with current design codes.



### ETABS

ETABS is an integrated, physical-object-based, software package for the modeling, analysis and design of buildings. It provides the tools to produce timely and efficient design solutions for a range of building types, including commercial, retail, medical and residential.



DETAILCAD

### Detailer's Genie

[www.detailcad.com](http://www.detailcad.com)

An online library, DetailCAD Detailer's Genie provides all required information to a steel detailer with a click of a button. Genie has the latest database of AISC Steel shapes and sectional properties in imperial and metric units. It displays information to check stiffener size, max and min rows, flange gauge and beam blocks for beams framing at an angle, and also a quick-reference weight and unit-load calculator. Tools like bracing calculator, bracing pull-off calculator, truss camber calculator, stair calculator, hip and valley curve calculator are quick references for checking. The information and diagrams can be saved into CAD formats (dwg or dxf) and can be printed. Genie also provides Interactive tools like feet-inch calculator, triangle calculator, bevel calculator, circle calculator and a numeric converter, which can convert into five different formats (ft, ft-in., mm, etc.).



# scorching! → → → → → → → → →

Taylor Devices

[www.taylordevices.com](http://www.taylordevices.com)



## Fluid Viscous Dampers

Since 1955, Taylor Devices has been producing energy-dissipation devices to protect virtually any type of structure against damage caused by earthquakes, wind, blast or live loads. Reusable after multiple earthquakes and active for all levels of earthquakes, these devices can result in enhanced performance while simultaneously reducing the cost of the structure.



## Lock-Up Devices

Lock-Up Devices allow free movement for slow velocities such as thermal expansion/contraction, yet act as rigid links for higher-velocity movements. These devices reduce movements and/or allow lateral forces to be shared between fixed piers and expansion piers on bridges.



## Tuned Mass Dampers

For applications where the installation of traditional dampers is not feasible, these devices can be used to reduce movement caused by wind, pedestrians or machinery. Contact Taylor Devices to learn more about these custom-engineered devices.

Lohr Structural Fasteners

## Thick Washer Face Smarhex™ TC A490

[www.lohrfasteners.com](http://www.lohrfasteners.com)

Lohr's Thick Washer Face Smarhex™ TC A490 eliminates the need for a separate  $\frac{5}{16}$ " hardened washer, which is required when A490 bolts with a diameter of 1" or larger are installed in connections with oversized or short slotted holes in an outer ply. The new bolt features Lohr's basic SMARTEX™ head design, but with a thickened washer formed as part of the bolt head. In addition to saving the expense of the washer itself, elimination of the  $\frac{5}{16}$ " washer also provides an additional usable  $\frac{5}{16}$ " grip on each bolt, which allows for reduced lengths.



Applied Bolting

[www.appliedbolting.com](http://www.appliedbolting.com)

## Squirter DTIs

Squirter™ DTIs have a self indicating feature to aid the installer. Squirter DTIs are made for use with ASTM A325 and A490 bolts, as well as their metric equivalents.



## Squirter-Twist Bolt

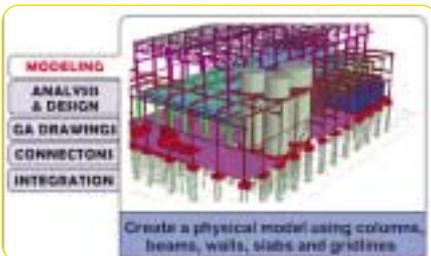
The Squirter-Twist Bolt combines the features of the TC bolt (light wrench, one-side, one-person installation) and the Squirter DTI.



## Research Engineers International and Tekla Structures with STAAD.Pro 2004

[www.tekla.com](http://www.tekla.com) and [www.reiusa.com](http://www.reiusa.com)

Tekla Structures with STAAD.Pro 2004 enables engineering, detailing and project management to be completed on one platform. All structural information (regardless of material) is managed throughout the project lifecycle from conception to erection. Project team members can share information in real-time regardless of their location, eliminating communication problems and reducing costs. The 3D information-management system is integrated with multi-material physical modeling of beams, slabs, walls, joists, etc.; analysis and design with STAAD inside; automatic creation of general-arrangement drawings, and parametric design of hundreds of connections. When one facet of the structural design chain is updated, the others automatically change, providing a flow of information from the architect to the detailer.



## Heckmann Building Products Weld-On Systems

[www.heckmannbuildingprods.com](http://www.heckmannbuildingprods.com)

The Weld-On systems can be welded at the fabrication shop or in the field. The triangle tie slips in the weld-on and allows for vertical adjustment into the masonry joint. The Twist-On Groutless Anchor attaches to a vertical rod installed by the joist manufacturer. All allow for vertical deflection.



## Chicago Metal Rolled Large Section Bender

[www.chicagometalrolled.com](http://www.chicagometalrolled.com)

Chicago Metal Rolled's large section bender can roll-curve 14"-20"-diameter steel pipe to tight radii or large sweeps without distortion and without the necessity of heating the material. For the first time, architects, engineers and owners can specify cold-curving of up to 20" pipe for buildings, canopies, and other architectural elements with significant cost savings over heat-induction bending. Fabricators can obtain this service with 3-day, 2-day, 1-day or same-day deliveries. While heat-induction bending works for extremely tight bends, cold-curving works better on large radii. For most structural applications, cold-curving of pipe is preferable to heat-induction bending, because cold-curving does not significantly change the physical and chemical properties of the steel.



## RAM International RAM Structural System, RAM Advance and RAM Connection

[www.ramint.com](http://www.ramint.com)

RAM International offers end-to-end software solutions for structural engineers: analysis and design for structures and materials, construction-drawing management, nonlinear solutions for earthquake engineering and collapse analysis. Thousands of engineering companies have standardized on RAM International's software solutions, including RAM Structural System with RAM Steel, RAM Concrete, RAM Frame and RAM Foundation, RAM CAD-studio, RAM Advance, RAM Concept, RAM Connection, and RAM Perform.



## Peddinghaus FPDB 2500/3

[www.peddinghaus.com](http://www.peddinghaus.com)

The Peddinghaus FPDB 2500/3 plate-processing center was designed to save overhead (80%) and material costs (up to 40%) for the structural steel fabricator. The one-pass process enables plate from 1/4" to 3" thickness, up to 96" wide, in unlimited lengths, to be processed from raw stock to finished part with one operator. On a typical 500-ton structural job, fabricators report savings of 19,000 man hours when compared to previous manual methods.



## Research Engineers International [www.reiusa.com](http://www.reiusa.com)

### STAAD.Pro 2004

STAAD.Pro 2004 features a user interface, visualization tools, and analysis and design engines with finite-element and dynamic-analysis capabilities. STAAD.Pro offers model generation, analysis and design, and visualization and result verification for steel, concrete, composite, timber, aluminum and cold-formed steel structures.

### STAAD.foundation

STAAD.foundation enables engineers to analyze and design the underlying foundation for structures, including isolated or combined footings, true mat foundations and pile-cap arrangements and design. By itself or integrated with STAAD.Pro, STAAD.foundation can produce production-quality reports, drawings of rebar arrangements and 3D-renderings of foundation structures.



## J&B Specialty Tool

[www.beamgaugetool.com](http://www.beamgaugetool.com)

### The Beam Gauge Tool

The Beam Gauge Tool is two- to three-times faster and more accurate than previous methods of laying out holes in the web. It contacts the outside of the flange at the center line of the web, as shown on structural blueprints for fabricators. Generally, layout people measure from the top of the flange to get to the first hole gauge. If flanges are tipped in or out (not square), the holes will be off. This presents a problem for erectors, because when things don't line up, the job cannot be completed on schedule, and everyone is thrown off track. The beam gauge tool helps prevent this problem.



### The Bevel Square Tool

The Bevel Square Tool is a 2' adjustable stand-alone square, for laying-out stairs, handrails, plates and beams. Comes with a time-saving hint for laying-out stair stringers with landings.



**hot!** → → → → → → → → → → → →

Carboline

**Carboxane 2000**

[www.carboline.com](http://www.carboline.com)

Carboxane 2000 is a hybrid polysiloxane finish with color/gloss retention. When used over Carbozinc primer, the system offers 25-30 years of weathering and corrosion-resistant performance. It cures at 35°F, eliminates a coat of paint, and is isocyanate-free for worker safety.



Girder-Slab Technologies, LLC

**The Girder-Slab® System**

[www.girder-slab.com](http://www.girder-slab.com)

The Girder-Slab® System is an alternative to cast concrete systems slated for use in mid-to high-rise residential construction. The system offers variable floor-to-floor heights and super fast construction. The system and D-Beam® Girder are available through authorized steel specialty contractors.



Hilti Corporation

[www.hilti.com](http://www.hilti.com)

**HIT-TZ Threaded Anchor Rod**

When used with the Hilti HIT HY 150/HIT-ICE Adhesive Anchor System, the HIT-TZ can save time and money. With 20-percent less embedment than standard embedded threaded rods and no cleaning required, it uses less HIT HY 150 and saves time drilling, cleaning, and inspecting.



**ST 1800 110-volt Adjustable Torque Screwdriver & SDT 25 Decking Tool**

With the SDT 25, the ST 1800 converts from a hand-held to a stand-up system for fastening deck sidelaps and attaching metal deck to bar joists and purlins. Adjustable handles and a 50-screw capacity promote operator comfort and productivity. Eighteen-position adjustable torque provides precise screw setting, and a rotating nose piece promotes portability.



SidePlate Systems, Inc.

**SidePlate™ Steel Moment-Frame Connection Technology**

[www.sideplate.com](http://www.sideplate.com)

SidePlate™ steel moment-frame connection technology can help respond to today's multi-hazard design challenges with the SureFrame™ system. The structural framing system is for wind and earthquake resistance; blast and impact hardening; and progressive-collapse mitigation. It is fully compliant with all current U.S. Government progressive-collapse design standards.

