

Products & Practice

Minnich M-Box

The Minnich M-Box is a controlled speed, high-cycle power converter that enables high-cycle vibrator operators to control the speed/vibrations per minute (VPM) of up to two vibrators. The M-Box minimizes time and cost associated with patching structural concrete surface blemishes caused by excessive vibrator speeds. Operators can select from speeds of 6000, 8000, and 10,800 VPM. The product converts the 230-volt, single-phase outlet of a 3500-watt generator to 230-volt, three-phase output, allowing the operator to choose a uniform and compatible constant speed under different concrete loads.

—Minnich Manufacturing, www.minnich-mfg.com



Nightstick DICATA XPP-5462 Series Intrinsically Safe Headlamp

With heavy-duty rubber straps and a low-profile design, Nightstick DICATA™ XPP-5462 headlamps are ideal for hard hats. Each has an LED spotlight and floodlight designed to optimize output. With a beam distance of 120 m (394 ft), the spotlight emits 275 lumens, and the floodlight emits 205 lumens. When operating simultaneously in dual-light mode, the headlamp emits 310 lumens. An independently controlled amber rear-facing light helps identify team members in dark, hazardous places. Two large front-mounted buttons allow users to easily toggle through the high/low beam options or have the spot and floodlight on simultaneously, even when wearing gloves.

—Bayco Products, Inc., www.baycoproducts.com

Cyclo

Cyclo is a high-performance collision avoidance system for drones (unmanned aerial systems [UAS]). Size, weight, power, computation, cooling, and cost can be minimized, without sacrificing performance. Cyclo can be employed as a software module implemented in hardware by drone manufacturers. The system allows true 360- or 720-degree collision protection—even during high-speed flight under adverse lighting conditions—using only a single passive camera and the drone's built-in processor. Cyclo extends collision avoidance capabilities to small, low-cost drones, and it requires no calibration.

—Binderr, www.binderr.co

Brokk 500 Demolition Machine

The Brokk 500 has 40% more breaking power than its predecessor. The machine delivers 1086 ft-lb (1472 J) with each blow of the 1510 lb (6.7 kN) Atlas Copco SB 702 hydraulic breaker. Brokk's three-part arm system reaches 24.3 ft (7.4 m) vertically and 23 ft (7 m) horizontally. The Brokk 500 retains most of the compact proportions of the Brokk 400 and weighs 11,464 lb (5200 kg). All the tools and attachments used for the Brokk 400 can also be used on the Brokk 500. It includes Brokk SmartPower, an intelligent electrical system that maximizes power output of the machine based on both environmental and operating factors. SmartPower is designed for the extremely tough operating environments of a demolition robot. In addition, it helps the operator start the machine on a poor power supply while simultaneously protecting the machine from harmful faulty power.

—Brokk Inc., www.brokk.com



Products & Practice

Spot-r EquipTag

Triax Technologies' Spot-r EquipTag tracks operator identity, equipment location, and equipment use both indoors and outdoors and in areas without clear line of sight to the sky. The plug-and-play, non-GPS solution integrates with the company's Spot-r network and its wearable sensor technology to provide digital visibility into worker and equipment activity, location, and safety in real-time and without restrictions such as equipment size or indoor/outdoor location. EquipTags work with Spot-r Clips to identify worker certification information and send immediate alerts if there is an unknown or unauthorized operator. Spot-r Clips layer in workforce and certification data, showing how the equipment is being operated across the jobsite and by whom. The Spot-r EquipTag adheres to any piece of equipment to track activity and data to help users coordinate rentals, optimize schedules, and improve safety and compliance.

—Triax Technologies, Inc., www.triaxtec.com



Wagman Metal Products Mondo Poly Brush

Wagman Metal Products' Mondo Poly Brush features stiff polypropylene bristles for general scrubbing on smooth concrete including cleaning floors after tilt-up construction and applying densifiers. The brush will not rust and is resistant to many chemicals. The Mondo Poly brush can be used on 36 and 46 in. (914 and 1168 mm) walk-behind as well as 6 and 8 ft (1.8 and 2.4 m) ride-on power trowels. The 11 in. (279 mm) size can be used on the Wagman LP230.

—Wagman Metal Products Inc., www.wagmanmetal.com

Spancrete Plotter

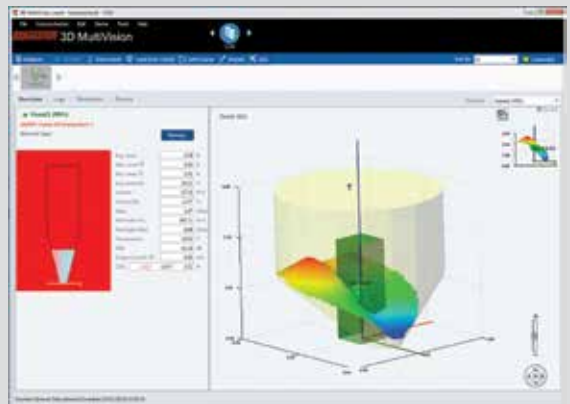
Fully automatic and battery driven, the Spancrete Plotter runs on top of the casting bed rails and draws marks for straight cuts, angle cuts, electrical sockets, slab number, manufacturer logo, and different cut-outs on fresh concrete. Software systems can remotely send files to the Spancrete Plotter to provide for full automation and immediate production capabilities. The plotter can drill weep holes. It can print on the top and side of products and on concrete and steel.

—Spancrete, www.spancrete.com

BinMaster 3DMultiVision

BinMaster's 3DMultiVision software uses 3DLevelScanners to identify the location of the center of gravity, display it graphically, and send an alert when the center of gravity falls outside of a predefined area. A 3DLevelScanner is mounted on the roof of the silo in an optimal location to view the material surface in the silo. Level measurements are used to determine the X, Y, and Z coordinates of the center of gravity based upon the material topography. The coordinates are processed in the 3DMultiVision software via a proprietary RS-485 communication protocol. Users define the alert parameters and accepted area into which the center of gravity must fall. A 3D visual will indicate where the center of gravity is located and show the acceptable area. The preventive maintenance tool alerts the need for inspection or cleaning and can be used over time to prolong silo integrity and create a safer environment by alerting operators to potential structural stress caused by uneven loading.

—BinMaster, www.binmaster.com



Web Notes

GSSI Launches New Website

Geophysical Survey Systems, Inc. (GSSI), launched a website that features a product configurator, training class calendar, and news and updates, including recent case studies and videos. The Innovation Lab section spotlights GSSI's engineering initiatives and custom solutions. The product pages feature equipment action pictures and explanations of applications for which it is most useful. Users will find data examples for each application and product, detailed product specifications, and support materials. The expanded training section, now called GSSI Academy, includes an enhanced class schedule, trainer bios, training request form, and ground-penetrating radar explanations and electromagnetic induction technology. The website also features an expanded support page, which includes direct access to user manuals and software updates.

—Geophysical Survey Systems, Inc., www.geophysical.com



Book Notes

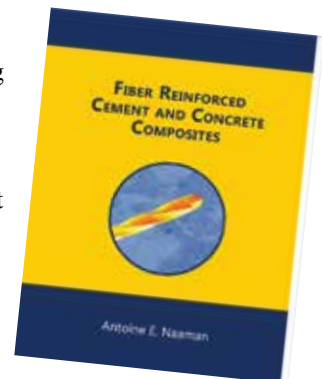
Fiber Reinforced Cement and Concrete Composites by Antoine E. Naaman

Fiber Reinforced Cement and Concrete Composites stresses the fundamental understanding

of behavior and modeling of fiber-reinforced cement (FRC) composites, and provides readers with a strong basis to design FRC composites and structures with FRC composites. The book is organized into 15 chapters. Chapter 1 presents a general background and overview of historical evolution of fibers and FRC composites. The following three chapters address the question: What do fibers do to concrete as a material? They provide information on the behavior and properties of the resulting composite. Chapter 5 describes different classes of applications, their purpose, and examples to answer the question: What do fibers do to structural concrete? Chapter 6 deals with fabrication methods and mixture design of FRC composites; potential challenges in manufacturing the composite, including proper fiber dispersion and mixture workability; and suggested solutions. Chapter 7 develops the fundamental relationships associated with fiber and matrix volumes or weights and their fractions, fiber count, fiber spacing, specific surface, equivalence relations, and the like. Chapters 8 to 14 focus specifically on analytical modeling, and Chapter 15 offers a look at the challenges ahead.

—Techno Press 3000, www.technopress3000.com

Price: \$200; 765 pp.; ISBN: 978-0-9674939-3-0



Products & Service Literature & Videos

ASTM C1851-18

Standard Practice for Determining the Extent of Cracking in a Sealant using the Difference between the Compressive and Tensile Modulus

ASTM C1851-18 outlines a way to quantitatively determine the extent and causes of cracking in a building sealant by evaluating the difference between the measured compressive and tensile modulus of a sealant relative to an unexposed or uncracked version of the same sealant. During measurements, cracks will reduce the area of the sealant in the tensile test, but they will not change the area of the sealant in the compressive test. Manufacturers could use the new standard to determine and ultimately enhance durability. The standard was developed by ASTM International Committee C24, Building Seals and Sealants.

—ASTM International, www.astm.org