

# Products & Practice

## Liebherr LTC 1050-3.1E

Mammoet's Liebherr LTC 1050-3.1E is the first electric hydraulic crane in its fleet. The Liebherr LTC 1050-3.1E can be plugged into a 32A-rated, 63A-rated, or 125A-rated power receptacle, so there is no limitation to the number of working hours it can deliver. And because lifting movements are powered electrically, noise generated on site is reduced to an absolute minimum. The crane will initially enter Mammoet's fleet in the Netherlands, working on a variety of projects in the civil and energy sectors. For travel between sites, the cranes will consume hydrotreated vegetable oil (HVO) fuel products, which offer a 90% reduction in carbon dioxide compared to diesel fuel.

—Mammoet, [www.mammoet.com](http://www.mammoet.com)



## ConcreteDNA

Converge and DEWALT have partnered to help decarbonize construction through Converge's artificial intelligence (AI)-based platform, ConcreteDNA, and powered by data from DEWALT's wireless concrete sensor, the DEWALT Signal Sensor. ConcreteDNA interprets real-time data from the DEWALT Signal Sensor and local weather data, allowing users to observe the compressive strength gain of concrete and to predict when it will reach critical strength. This allows concrete professionals to begin work sooner, as they can directly evaluate hardening rather than rely on estimation. Further, the deep insights provided by ConcreteDNA will allow the production of lower embodied carbon concrete mixtures without sacrificing performance.

—Converge, [www.converge.io](http://www.converge.io)

## TS 440 STIHL Cutquik

The adjustable guard on the TS 440 STIHL Cutquik® cut-off machine enables cutting near corners and other tight spaces. The expanded guard adjustability is made possible by the sensor-activated STIHL Quickstop™ wheel brake technology, which can stop the rotation of the cutting wheel in fractions of a second if kickback occurs. The TS 440 two-belt drive delivers high torque to the wheel, and the top handle design increases balance and maneuverability. The TS 440 shares many features of the family of STIHL Cutquik cut-off machines, including electronic water control that allows for efficient water flow adjustment while cutting, the ElastoStart™ starter handle with a built-in shock absorber that helps reduce the effort when pulling on the starter cord, and the STIHL anti-vibration system that helps reduce operator fatigue.

—STIHL, [www.stihlusa.com](http://www.stihlusa.com)



## ArcSite

ArcSite announced full availability of its application for computer-aided design (CAD) and drawing on all Android platforms, opening the product up to a wider audience. ArcSite, a mobile CAD and building information modeling (BIM) application, allows users to create two-dimensional drawings and capture building information for a variety of applications. Residential and commercial contractors can sketch site plans and generate material lists and estimates, while homeowners and hobbyists can use ArcSite for home design or remodeling projects. ArcSite reimagines a decades-old technology purpose-built for the way users live and work in the modern world.

—ArcSite, [www.arcsite.com](http://www.arcsite.com)

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## Maven

DeepHow introduced Maven, a know-how management platform that harnesses the power of generative AI to revolutionize learning and collaboration for workforces. The Maven platform assists in the creation of training videos by generating shooting guides and narration scripts based on written standard operating procedures (SOPs). Alternatively, the platform can produce text SOPs and workflow diagrams based on videos of task demonstrations. Further, Maven's knowledge mapping system allows the identification of knowledge gaps among existing SOPs, and its interactive AI Chat rapidly provides personalized, engaging access to vital information.

—DeepHow, [www.deephow.com](http://www.deephow.com)

## RapidAir

RapidAir by Germann Instruments is an image analysis system that allows rapid determination of the air-void structure parameters in hardened concrete in accordance with the ASTM C457/C457M or EN 480-11 standard methods. After a concrete sample has been polished and tinted to highlight air voids, it is mounted on a stage below the RapidAir video camera. The RapidAir control unit then automatically moves the stage, and software determines the portion of the total traverse length passing through the air voids. Total air content, spacing factor, and specific surface are rapidly calculated, and the air-void distribution and the raw data can be graphically displayed.

—Germann Instruments, [www.germanninstruments.com](http://www.germanninstruments.com)



## Book Notes

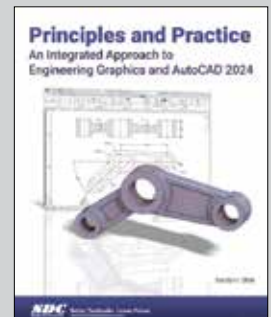
### *Principles and Practices: An Integrated Approach to Engineering Graphics and AutoCAD 2024*

by Randy H. Shih

*Principles and Practices: An Integrated Approach to Engineering Graphics and AutoCAD 2024* combines an introduction to AutoCAD 2024 with comprehensive coverage of engineering graphics principles. The tutorial exercises in this text have also been expanded to cover the performance tasks found on the AutoCAD 2024 Certified User Examination. Designed to be used for the training of students and professionals, the chapters in the text proceed in a pedagogical fashion to guide readers from constructing basic shapes to making complete sets of engineering drawings. This textbook comprises 13 chapters and takes a hands-on, exercise-intensive approach to important concepts of engineering graphics, as well as in-depth discussions of CAD techniques.

600 pp.; ISBN 9781630575939

—CRC Press, [www.routledge.com](http://www.routledge.com)



### *Project Delivery – A Design-Build Done Right® Primer*

by Design-Build Institute of America

The Design-Build Institute of America (DBIA) released its *Project Delivery Primer*, focusing on ensuring owners have the appropriate information to choose the right delivery system for their projects. Choosing a project delivery method is one of the most fundamental decisions owners face when developing their acquisition strategy, and DBIA's *Project Delivery Primer* provides guidance in this area. Some key areas covered in the text include an outline of the relationship between key factors of a project's Strategic Acquisition Plan, including the project delivery system, procurement method, and contract format; a description of the relationships between and responsibilities of the parties involved in a project; and a comparison of major project delivery systems—design-build, construction management at risk, and design-bid-build. The new *Project Delivery Primer* can be downloaded from the DBIA Bookstore at no cost.

—DBIA, <https://store.dbia.org>

# Product Showcase

## Admixtures

### MAPEI's CUBE

MAPEI's CUBE is a system comprising strength-enhancing admixtures designed to reduce the environmental impact of concrete production and is suitable for precast concrete and ready mixed concrete: *Mapecube 1*—for use with cement on projects requiring high-early-strength development or construction in cold climates; *Mapecube 4*—for use with supplementary cementitious materials such as fly ash, silica fume, slag cement, and natural pozzolans; and *Mapecube 60*—for use in concrete mixtures designed with lower cement content and reduced CO<sub>2</sub> emissions.

—MAPEI, [www.mapei.com/us](http://www.mapei.com/us)



### PENETRON ADMIX

PENETRON ADMIX is a crystalline admixture that allows reductions in cement content, reduces the permeability of concrete structures, and extends service life. Other benefits of PENETRON ADMIX include replacing unsustainable waterproofing solutions, providing self-healing capability, minimizing future waterproofing-related maintenance, helping maintain or shorten construction schedules, increasing protection against reinforcing bar carbonation and corrosion, and increasing resistance to chemical attack. PENETRON ADMIX is nontoxic and Environmental Product Declaration (EPD)- and GREENGUARD GOLD-approved.

—PENETRON, [www.penetron.com](http://www.penetron.com)

### Rapid Set Liquid Low-P

CTS Cement Manufacturing Corp. introduced Rapid Set® Liquid Low-P™ (Rapid Set LLP), a corrosion inhibitor that can be dispensed with volumetric mixers. Rapid Set Cement dosed with Rapid Set LLP achieves the compressive strength required for ASTM C1600/C1600M Type VRH (very rapid hardening) cements. Rapid Set LPP protects steel reinforcement from corrosion by forming a protective layer on steel, and it improves the freezing-and-thawing resistance of Rapid Set Cement concrete even at relatively low air content. Combined with Rapid Set Cement's early strength (up to 4000 psi [27.6 MPa] at 1 hour when produced by volumetric mixers), these characteristics make the admixture ideal for construction and repair of reinforced concrete bridge deck overlays, pavements, parking structures, tunnels, and marine structures.

—CTS Cement Manufacturing Corp., [www.ctscement.com](http://www.ctscement.com)



### MCI-309

Cortec® MCI®-309 is a solution for corrosion protection of post-tensioning (PT) tendons that have been installed but not grouted due to delays from winter weather and freezing temperatures. This Migrating Corrosion Inhibitor™ powder is easily fogged through ducts using a low-pressure air hose and sandblasting cup. MCI-309 releases corrosion-inhibiting vapors that diffuse throughout the entire void space. The corrosion inhibitor is attracted to metal and adsorbs onto tendons to form a protective molecular layer. When weather conditions improve, grout can be applied as normal without flushing the corrosion inhibitor out of the duct. Due to its migrating ability, MCI-309 can be used for corrosion protection in other void space applications where painting is impractical.

—Cortec Corporation, [www.cortecmci.com](http://www.cortecmci.com)

