

PUSHING AHEAD

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SECOND-GENERATION PC210LCi

New *intelligent* Machine Control excavator offers improved efficiency, joystick functionality



KOMATSU®

A MESSAGE FROM THE PRESIDENT



Ronald Zagami

Clairemont Equipment Company Parts • Rentals • Sales • Service

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Dear Valued Customer:

Our country faces an infrastructure crisis. Congested and deficient roadways and unsound bridges are safety hazards. Clean and safe water-supply pipelines are vital to our everyday needs. Yet, we consistently underinvest in these and other basic items. There is talk in Washington about addressing these issues with a \$1 trillion – or more – infrastructure plan, but nothing is concrete, and lawmakers continue to put it off.

We encourage you to contact your representatives and push for proper funding to bring our nation's infrastructure well above the dismal D⁺ grade the American Society of Civil Engineers recently gave it.

A hearty investment in infrastructure would create numerous jobs. It's no secret that the construction industry is in the midst of a labor shortage. We hope that lawmakers can address this topic too with ways to help fund more vocational programs. In this issue of your Clairemont Pushing Ahead magazine, you can read how the construction industry is taking steps to encourage young people to consider construction as a career.

What could be better than running equipment such as Komatsu *intelligent* Machine Control excavators? You can learn about the latest model, the second-generation PC210LCi-11, inside. There are also articles on new large trucks, a log loader and more, showcasing the broad range of equipment that Komatsu manufactures.

Of course, someone has to maintain those machines. Komatsu continues to partner with Oklahoma State University Institute of Technology (OSUIT) to educate and train tomorrow's technicians. I believe you will find the story in this issue focused on the 20-year relationship between Komatsu and OSUIT an interesting read.

As always, if there's anything we can do for you, please call or stop by one of our branch locations.

Sincerely,
CLAIREMONT EQUIPMENT COMPANY

A handwritten signature in black ink that reads "Ronald Zagami". The signature is fluid and cursive, written in a professional style.

Ronald Zagami,
President

**Time to step up
infrastructure
spending**

**Clairemont
Equipment**
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FORESTRY NEWS

Find all the details on Komatsu's PC290LL-11 log loader with features that increase productivity and operator comfort.

INNOVATIVE PRODUCT

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MORE NEW PRODUCTS

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HANDS-ON EXPERIENCE

Ride along as customers test the latest *intelligent* Machine Control equipment and learn about Komatsu's SMARTCONSTRUCTION services at spring Demo Days.

KOMATSU & YOU

Get to know Rich Smith, Vice President, Product and Services Division, who shares how face-to-face customer interactions lead to improved products.

SERVING YOU BETTER

Join the celebration as Komatsu's training program at Oklahoma State University Institute of Technology marks 20 years of educating heavy-equipment technicians.

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Oliver Gastelo, Manager

NEW PATH TO CONSTRUCTION JOBS

Industry finds creative solutions to recruit millennials, address employee shortage

Ask any contractor what is the biggest challenge facing his or her business, and the answer will likely center on finding qualified workers. Since the Great Recession ended, recruiting capable employees with construction experience has presented a problem for many companies.

Recently, however, hiring employees to work in the industry at all – regardless of their experience level – has become a larger issue that is impacting the skills gap. Baby boomers make up 40 percent of the construction workforce. The generations that followed haven't joined the industry with as much regularity, setting the stage for a significant worker shortfall as the baby boomers begin to retire.

The Bureau of Labor Statistics on Occupational Outlook predicts the construction industry will need 1.7 million workers by 2020. With the national housing market experiencing tremendous growth and infrastructure projects continuing to get the green light, construction companies are often unable to keep pace by hiring additional employees. This can create dire

consequences for an industry that is crucial to the health of the American economy.

The millennial issue

While there is no quick fix to the shortage of workers, the solution is fairly obvious – the industry needs to recruit millennials, those born between the early 1980s and the early 2000s. This is no small task, and it will require employers to drastically change their mindsets as well as that of those in the hiring pool.

Select a reason for millennials' lack of interest in the construction field – an education system that values four-year degrees, lack of blue-collar work ethic, addictions to smartphones and video games or a sense of unearned entitlement – and there is a study to back up the claim. However, construction isn't the only industry scrambling to learn how to employ this generation.

According to a 2016 study by staffing agency Adecco, 92 percent of business leaders across multiple industries said that Americans are not as skilled as needed for employment. The study also reported that 64 percent of the leaders interviewed think this shortage of skilled workers will result in a serious lack of investment in their companies.

With several industries, including education, health care and tech, vying for the services of the millennial workforce, some employers are in an unfamiliar position of needing to become more marketable to potential employees after decades of the reverse being true. Industries that adapt their recruiting practices to attract millennials will be better-positioned for success.

Back to school

Thanks to budget cuts and a growing emphasis on preparing teens to enter four-year colleges or universities, trade programs have been reduced or cut completely from the public school system. This

Baby boomers account for 40 percent of the workforce in the construction industry. As this generation enters retirement, the construction industry is in a race against time to find workers to fill the void.





The Bureau of Labor Statistics on Occupational Outlook predicts the construction industry will need 1.7 million workers by 2020. With a national housing-market boom and more infrastructure projects getting the green light, construction companies are often unable to keep up with demand.

has shrunk the pool of qualified workers who can trade their caps and gowns for hard hats and steel toes upon graduation.

One strategy delivering positive results is to tailor education that fits the prevailing college-bound mindset of today's students. Such programs allow young people to have the college experience, yet still learn the skills necessary for a trade. These options provide an attractive alternative to the growing price tag of a four-year degree. By completing a vocational program, students save the expense of two years of college – while also paying lower annual tuition compared to four-year programs – and enter well-paying careers sooner and with far less or no debt.

It is a trend that has gained significant traction. Diesel-technology programs at North Dakota State College of Science (NDSCS) and Oklahoma State University Institute of Technology offer a blend of classroom and hands-on learning to prepare students for careers in just two years. Additionally, agreements with manufacturers and distributors allow participants to work in local dealers' garages as part of the course, with many students guaranteed employment with those dealers after graduation. *(See related story in this issue about the Komatsu Advanced Training program at Oklahoma State University Institute of Technology.)*

A Technician and Career Developer for the Komatsu distributor in North Dakota reports that the company has seen great returns from



Reinhardt University student Russell Goemaere (left) meets with a hiring representative at a Komatsu Recruitment Day in Cartersville, Ga. Events aimed at bringing more millennial workers into the industry are common as companies try to overcome the worker shortage.

its partnership with NDSCS. "The students are part of our culture for two years. There's no learning curve. Once they walk across that stage at graduation, they are full-time employees."

Creative programs

Cramming for tests and writing endless term papers can make even the brightest students sweat. Research shows that programs which blend real-world experience with traditional classroom teaching yield the deepest level of learning by combining theory with practice. For educators catering to the construction industry, designing programs in this way is now a key focus.

One school demonstrating success with this model is Ohio's Butler Tech, which offers hands-on, technical training for high schoolers. Butler Tech students in construction and landscaping programs recently remodeled a local Little League complex, in addition to taking academic courses. Supervisor

Continued . . .

Incentives, flexibility are key factors

... continued

Jon Graft says that the program gives students an education which translates to their future jobs and also introduces them to industry professionals, creating a pipeline between employers and potential employees. The Association for Career and Technical Education says that students enrolled in similar programs have a high school graduation rate of 93 percent, with 60 percent of students pursuing careers in the field for which they received technical training.

Middle Tennessee State University (MTSU) applies a similar model at the four-year university level with its concrete-industry degree. While in the program, students combine classwork with hands-on learning on their way to a bachelor's degree. Another program aim is to match students with potential employers for summer jobs that pay as much as \$20 an hour and can produce multiple job offers upon graduation.

"If we can't get students out to the industry, our goal is to bring the industry (to them)," explained Nicole Green, Marketing and Recruiting Coordinator for the MTSU concrete-industry program, in an April 2017 interview with online media outlet, Construction Dive.

Third-party entities are stepping up to meet the construction-industry recruiting challenge as well. For example, Extreme Sandbox specializes in the use of construction equipment for entertainment purposes, with packages typically geared toward fun outings for adults. However, it also addresses the worker shortage through its high school heavy-equipment camps. Owner Randy Stenger refers to the camps as "edu-tainment" sessions to familiarize kids with the construction industry and generate excitement about careers in the field. (See related article in this issue about heavy-equipment camps at Extreme Sandbox.)

Individual companies are also taking matters into their own hands. In an effort to boost recruiting, some have begun sponsoring high school graduates, offering them summer internships while paying the expenses for a portion or all of their two-year college programs. For graduates planning to work in construction, but who don't want to attend college, firms are incorporating more training and accepting that the learning curve for new hires may be steeper than it was 20 years ago. Employers see sponsorships and extended training as viable methods to build loyalty with new employees, while also ensuring that they have well-qualified workers.

What does the future hold?

The path that tomorrow's construction workers take to employment will look quite different from the generations that preceded them. To solve this critical issue, both future employees and employers need to change their thinking to find answers.

There are solutions. From technical education programs backed by corporate manufacturers, to local contractors allocating more time and funds to train new hires, the industry is taking steps to recalibrate its approach and strengthen its future. ■

Extreme Sandbox hosts several high school heavy-equipment camps annually at its Hastings, Minn., facility to familiarize students with the construction industry through hands-on activities.



Komatsu Director of Distributor Development Mike Hayes (center) poses with the 2016 Komatsu Diesel Program graduates at North Dakota State College of Science. Sponsored two-year vocational programs are a popular option for both equipment distributors looking to hire qualified workers and students who want a college experience.



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“I’ve used them all
and Komatsu
is the best.”

TAD GRIFFITHS
ROYAL T ENTERPRISES / UTAH

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“Komatsu’s i-machines definitely make my operators better at what they do. I mean, we haven’t been using this technology for the past twenty years, so it’s pretty new. But this tech makes it easier to do our job—makes it so that my operators can work more efficiently, and we get a better finished product.”



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I AM KOMATSU

"Komatsu support keeps us going."

MATT SMITH

PRESIDENT / SITEWORX / LEBANON, OH

THE CUSTOMER IS ALWAYS RIGHT.

"Product performance, brand reputation and good pricing were a big part of why I switched to Komatsu.

I saw their commitment to the customer, and once we tried the product we were instantly blown away!

Komatsu's and my distributor's support are first class. And Komatsu was first to market with *intelligent* Machine Control. They're always adding innovations that keep me more efficient, and more profitable."



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NEW PRODUCT

SECOND-GENERATION PC210LCi

New *intelligent* Machine Control excavator offers improved efficiency, joystick functionality

When Komatsu first introduced *intelligent* Machine Control excavators, it started with a PC210LCi-10. Two years later, it brings the second generation to market with the PC210LCi-11 that leverages the proven track record of its pioneering predecessor while adding eagerly awaited machine-control-joystick functionality.

Like other Komatsu *intelligent* Machine Control excavators, the PC210LCi-11 has factory-integrated technology. It offers up to a 63-percent improvement in efficiency compared to a standard PC210LC-11 and traditional stake-plus-grade-checker method.

Reduced costs through work function automation

The PC210LCi-11 saves time and money by minimizing the need and expense of grading dozers and grade checkers, as well as the costs associated with overexcavating, such as extra materials, fuel and time.

The machine has full, 3-D Global Navigation Satellite System capabilities that are tied into machine hydraulics. This allows actual automation of work equipment functions, not just the indication/manual-only operation typically found in aftermarket systems.

Advanced features of the PC210LCi-11 include a facing-angle compass and minimum-distance bucket control that deliver in a simple, intuitive manner. It is also equipped with Auto Grade Assist, Auto Stop Control and Minimum Distance Control, which contribute to the machine's ability to effectively reach target elevation without overexcavating.

"With increased productivity, jobs can be completed on-time, under budget and with less equipment," said Sebastian Witkowski, Komatsu Product Marketing Manager. "The PC210LCi-11 is productive and precise enough to be a fixture on jobsites ranging from basements and foundation pads to utility work. In addition to the efficiency that machine owners look for, the added convenience of the machine-control-joystick functionality should make operators happy, too." ■



Sebastian Witkowski,
Komatsu Product
Marketing Manager

Quick specs on Komatsu's PC210LCi-11 Excavator

Model	Net Horsepower	Operating Weight	Bucket Capacity
PC210LCi-11	165 hp	50,706 - 51,599 lb	0.89 - 2.56 cu yd

Komatsu's new *intelligent* Machine Control PC210LCi-11 features machine-control-joystick functionality. Industry-leading technology offers up to a 63-percent improvement in excavating efficiency compared to a standard PC210LC-11 and traditional stake-plus-grade-checker method.



SMARTCONSTRUCTION

DIG STRAIGHT TO GRADE

AUTOMATED TO MAKE THE PRODUCTION YOU NEED



Want to make your next machine acquisition really count? Komatsu's lineup of automated excavators, including the all-new PC360LCi-11 and PC490LCi-11, feature a revolutionary, factory integrated, machine control system. The exclusive *intelligent* Machine Control technology lets operators focus on moving materials efficiently, without worrying about digging too deep or damaging the target surface. Contact your Komatsu distributor to learn how you can hit pay dirt today with Komatsu innovation.

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Discover more

INCREASED POWER, COMFORT

New PC290LL-11 log loader delivers high performance in demanding applications

Every forestry business appreciates opportunities to improve its operations, and the new Komatsu PC290LL-11 log loader provides just that. Available in either a 40-foot-reach, live heel log loader or 34-foot-reach, road builder configuration, the PC290LL-11 delivers high performance in demanding logging applications. (Komatsu plans to introduce a processor configuration in the future.)

“We designed the PC290LL-11 by first identifying and then meeting customers’ needs,” stated Steve Yolitz, Manager, Marketing Forestry for Komatsu America. “For example, in terms of productivity, it has increased drawbar pull. Regarding operator comfort, it has electro-proportional control, or EPC, thumb-actuated buttons for precise attachment function control, as well as all LED lighting, which can extend the work day.”

The PC290LL-11 log loader features powerful PC360-class final drives that generate 64,250 pounds of drawbar pull for excellent shovel logging and rough-terrain performance. A rugged PC390-class swing motor and drive deliver high swing torque for superior log loading and road building performance.

Komatsu’s standard, robust forestry guarding package now includes an enhanced, right-hand corner-guard system with a fully protected LED light, plus a tree deflector with a “hockey stick” design that can be removed or reverse-mounted for transport. The track-frame steps are also removable or can be reverse-mounted to achieve an 11-foot 5-inch transport width, which meets most local regulations and reduces the need for special transport permits.

High-capacity cooling, cab choices

A new, high-capacity cooling system utilizes wide-core cooling fins for the radiator,

hydraulic oil cooler and a charge air cooler for improved performance and reliability. The heavy-duty, one-quarter-inch-thick cooler air-intake door is waffle-screened and sealed to reduce debris accumulation and cleaning time.

The modern, fully certified cab is more comfortable with lower-profile, pilot proportional control levers for the boom, arm and heel functions. The LCD monitor has a split-display mode, showing both a rear-camera view and key machine gauge data at the same time. The cab is available with a 48-inch hydraulic tilt or 7-inch, fixed-cab riser.

“The initial customer feedback has been very positive,” said Yolitz. “The PC290LL-11 is definitely meeting and exceeding their needs as we had planned” ■



Steve Yolitz,
Manager,
Marketing Forestry,
Komatsu America

Quick Specs on Komatsu’s PC290LL-11 Log Loader

Model	Net Horsepower	Operating Weight	Reach
PC290LL-11*	196 hp	89,730 lb	40 ft
PC290LL-11**	196 hp	82,230 lb	34 ft

*Live heel, log loader configuration **Road builder configuration



The new PC290LL-11 is available in either a 40-foot-reach, live heel log loader or a 34-foot-reach road builder configuration. It features a new, high-capacity cooling system for improved performance and reliability.

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“There’s nothing this
hi-tech out there!”

ANTHONY CARLTON
OWNER / CARLTON, INC / ALPINE, UT

THE CUSTOMER IS ALWAYS RIGHT.

“Using and understanding the new product technology, available from Komatsu for our business, made me apprehensive at first. But our dealer and their technical support have worked with us to help us make the tech work for our needs. I am seeing the benefits now. I’m on board and love it!”



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INNOVATIVE PRODUCT

NEW PRODUCTION EXCAVATOR

PC650LC-11 built for mass excavation and deep trenching

Whether loading trucks or working in deep sewer and water-trenching applications, Komatsu's new PC650LC-11 delivers. This newcomer to the company's excavator lineup maintains the productivity and transportability of the previous Dash-8 model while at the same time improving fuel efficiency, cab design and serviceability.

With nearly 2 percent more horsepower compared to its predecessor, the PC650LC-11 still lowers fuel consumption. The 436-hp engine is Tier 4 Final emissions-certified and has an integrated selective catalytic reduction system that uses diesel exhaust fluid (DEF) to meet EPA NO_x regulations.

The powerful engine, combined with a highly efficient hydraulic system, gives the excavator excellent digging force at depths of up to 33 feet 6 inches. Operators can choose from three working modes to match material and work load. A one-touch Power Max function increases horsepower on demand by 8 percent for eight seconds when needed.

"The PC650LC-11 matches perfectly with 30- to 40-ton trucks for high-production loading, and it is well-suited for mass excavation and deep sewer and water-trenching applications," said Justin Lantin, Komatsu Product Marketing Manager. "It is also designed to accommodate flexible job operations that require frequent transportation with reduced time needed for disassembly."

'Greater value'

Komatsu specifically designed the cab for excavators, giving it both strength and comfort. It features a reinforced box structure framework and is mounted on viscous isolation dampers for low vibration levels. Its monitor shows DEF level, ecology guidance, operational records,

fuel consumption and utilization information. A new display combines machine information and a wide, landscape view from the standard rearview camera, allowing operators to easily see the working area behind the machine.

"With our Level 5 KOMTRAX telematics system, operators and owners have access to increased data to better manage their operational costs," said Lantin. "Like other Tier 4 machines, this excavator comes with our Operator Identification System and Auto Idle Shutdown. Whether rented, leased or purchased, the PC650LC-11 is covered by Komatsu CARE, which provides complimentary scheduled maintenance and a 50-point inspection at each service for the first three years or 2,000 hours. It all adds up to greater value." ■



Justin Lantin,
Komatsu Product
Marketing Manager

Quick Specs on Komatsu's PC650LC-11 Excavator

Model	Net Horsepower	Operating Weight	Bucket Capacity
PC650LC-11	436 hp	140,4567-145,284 lb	2.05-4.98 cu yd

The 436-horsepower PC650LC-11 improves fuel efficiency, cab design and serviceability compared to its predecessor. It matches perfectly with 30- to 40-ton trucks for high-production loading, and it is well-suited for mass excavation and deep sewer and water-trenching applications.



MORE NEW PRODUCTS



HD465-8



HD605-8

NEW RIGID-FRAME TRUCKS

Increased horsepower, traction control system improve productivity and per-ton costs to move materials



Rob McMahon,
Komatsu Product
Marketing Manager

Haulage is all about moving materials from point A to point B at the lowest per-ton cost possible. Komatsu's new Dash-8 HD465 and HD605 rigid-frame trucks improve on the already-stellar record of its predecessors with a higher horsepower engine (724 hp) and a Komatsu Traction Control System (KTCS) that increase productivity.

In addition to higher horsepower, the Tier 4 Final engine reduces fuel consumption by up to 12 percent in the

HD465-8 and up to 7 percent in the HD605-8 compared to the Dash-7 models they replace, further lowering costs. Hydraulically actuated Exhaust Gas Recirculation working with the Variable Geometry Turbocharger ensures precise operation and quick response.

System delivers optimum traction

Now standard, the KTCS automatically applies independent brake assemblies to achieve optimum traction in varying ground conditions. Because the system operates without the need for differential lock-up, steering performance is not compromised. The Komatsu Advanced Transmission with Optimum Modulation Control System (K-ATOMiCS) adjusts shifting performance, according to demand, for a more comfortable ride and reduced material spillage.

Cab upgrades

Komatsu improved cab access with sloped stairs and handrails in front, replacing the previous ladder configuration. Additional new features include a 7-inch LCD color screen, a dedicated rearview monitor, fast-fill fuel system, an engine compartment light and a premium heated and ventilated operator's seat with air suspension.

"With an increase in horsepower and improved fuel economy, the HD465-8 and HD605-8 are designed to maximize production efficiency," said Rob McMahon, Komatsu Product Marketing Manager. "Enhancements to the cab layout and maintenance access, combined with new technology features, give these trucks something everyone will like." ■

Quick Specs on Komatsu's HD465-8 and HD605-8 Models

Model	Net Horsepower	Gross Vehicle Weight	Payload Capacity
HD465-8	724 hp	228,179 lb	61 ton
HD605-8	724 hp	252,870 lb	69.4 ton

Komatsu's new HD465-8 and HD605-8 feature higher horsepower engines than their predecessors, as well as the Komatsu Traction Control System. The combination helps improve productivity.



HANDS-ON EXPERIENCE



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TEST-DRIVING THE FUTURE

Customers have opportunity to experience the latest offerings from Komatsu

Nearly 180 customers attended Komatsu's spring Demo Days at its Cartersville Customer Center in Georgia. The three-day event featured the company's latest products, including its industry-leading *intelligent* Machine Control equipment and new SMARTCONSTRUCTION service that debuted at CONEXPO-CON/AGG 2017.

"Our Demo Days are great events because they give customers the chance to operate equipment and talk to our experts, so they get a real feel for everything these machines can do," said Komatsu Director of Training and Publications Tom Suess. "The technology on our *intelligent* Machine Control pieces is amazing, and to give customers the chance to experience them first-hand is really valuable."

In the morning, attendees had the option to tour Komatsu's Chattanooga Manufacturing Operation in Tennessee or take part in a SMARTCONSTRUCTION session and learn more about the service that helps customers achieve maximum performance through their *intelligent* Machine Control equipment. The SMARTCONSTRUCTION session was held in the recently renovated theatre at the Cartersville Customer Center.

After lunch, attendees had the remainder of the afternoon to operate more than 30 machines, including Komatsu's latest releases, the HB365LC-3 hybrid excavator, PC650LC-11 excavator, PC170LC-11 excavator, HD605-8 haul truck and D51PX-24 dozer. The lineup also featured the entire family of *intelligent* Machine Control excavators and dozers.

Komatsu's operator-training simulator, Worksite VR, unveiled at CONEXPO-CON/AGG, was available for customers to try out as well. Attendees completed a series of excavator

tasks using a pair of virtual-reality goggles and working joysticks.

Many firsts

The event also served as a welcome for Komatsu America's new President and Chief Operating Officer Hank Takatsuki.

"Demo Days are always exciting, but this was special because there were so many firsts," said Suess. "It was our initial event after CONEXPO-CON/AGG that gave customers the chance to test all of the things they may have seen or heard about from the exhibit; we were able to show off our recent renovations; and we had the opportunity to welcome Hank. It was an awesome week and a great springboard into the future." ■



Tom Suess,
Komatsu Director
of Training and
Publications



Using Komatsu's Worksite VR operator-training simulator, this customer completes a series of tasks on a computer-generated excavator.

A customer tests
Komatsu's PC650LC-11
excavator at Demo Days
in Cartersville, Ga.



▶ VIDEO

WE LISTEN AND LEARN

Rich Smith says direct customer engagement leads to productive changes in Komatsu machinery



This is one of a series of articles based on interviews with key people at Komatsu discussing the company's commitment to its customers in the construction and mining industries – and their visions for the future.

Rich Smith, Vice President,
Product and Services Division

Rich Smith has been with Komatsu America for 27 years, beginning his career in manufacturing. He has served a variety of functions at Komatsu, including manufacturing, product support, contract administration, technical support and product marketing. His wide range of experience is particularly valuable in developing new products and expanding business into new markets.

“When I started with Komatsu it was at the forefront of machine technology with autonomous trucks,” recalled Smith. “It remains there today with innovative products such as our *intelligent* Machine Control excavators and dozers. I remember when I first saw aftermarket, grade-control systems on dozers and thinking that those masts and cables are going to get ripped off, figuratively and literally. Komatsu solved that by integrating grade control into the machines.”

Smith serves on the National Mining Association Board of Directors; is the current President of the National Mining Association Manufacturers and Services Board of Governors; and is also on the Board of Directors of the Energy Equipment and Infrastructure Alliance. He graduated summa cum laude from the University of Illinois at Springfield with a degree in Business Administration and Management.

“I started on the shipping dock at our plant in Peoria, Ill., and worked my way up,” said Smith. “I value three things highly: honesty, integrity and work ethic. So does Komatsu, and that’s part of why I’ve stayed here so long. It’s like a family-owned business inside of a large organization. I can’t imagine ever working for another manufacturer.”

QUESTION: What does the construction market look like?

ANSWER: The market was down slightly last year, but despite that, Komatsu still delivered a lot of machines into the field. This year is off to a good start, and our customers are telling us there may be a bit more strength in the back half of the year.

QUESTION: How does Komatsu meet the demands of a seemingly ever-changing marketplace?

ANSWER: No matter the market situation, we continue to engage customers directly. We make a concerted effort to get out of the office and into the field. During the past few years, we have made more than 15,000 visits to customers, and that’s helped us to better understand the markets and our customers’ needs.

Further, demonstrations at our Cartersville Customer Center allow us to bring current and potential users of Komatsu equipment to our training and demonstration facility where they can operate our latest machinery and give us feedback.

Customers often share ideas on how they can use the machines in ways that we had not considered. One of the benefits is that we are taking this information and driving it back into our development processes. We use it to manufacture machines that are more specific to the North American construction marketplace and customer needs.

QUESTION: Can you provide some examples?

ANSWER: Our Tier 4 Final Dash-11 excavators are performing at a much higher level than the



Komatsu Vice President, Product and Services Division Rich Smith says visiting with customers provides valuable feedback. “No matter the market situation, we continue to engage customers directly,” said Smith. “During the past few years we have made more than 15,000 visits to customers, and that’s helped us to better understand the markets and our customers’ needs.”

Interim Dash-10s. When the Interim machines were introduced, there was a strong push for fuel efficiency. North American customers appreciate that, but it’s not as important to them as in countries where fuel prices are much higher. Instead, those in North America want to maximize productivity. So, we talked to them directly to find the right ratio of economy and production. For example, the PC360LC-11 is now approximately 12 percent more productive than its predecessor while still being quite fuel-efficient.

Another example is the introduction of an Advanced Joystick Steering System (AJSS) in our WA500 wheel loaders, something not previously available in that size of machine. Customers told us they sometimes use it in load-and-carry applications, and AJSS allows them to maximize productivity and minimize cycle times. With standard joystick steering, the top speed is limited for controllability issues and comfort. With AJSS you don’t have to do that, so operators can run at top speed in the load-and-carry application.

QUESTION: Attendees could see some of these machines at CONEXPO, along with *intelligent Machine Control* excavators and dozers. What’s on the horizon for those products?

ANSWER: We recently introduced the Tier 4 Final PC210LCi-11 excavator (*see related article*), and we are developing other products. But, we’re looking well beyond the iron. CONEXPO was our formal launch of Komatsu’s future vision of SMARTCONSTRUCTION, which provides jobsite solutions with items such as 3-D aerial mapping, personnel training for machine usage and optimization, progress and cost tracking, project management and



Some product improvements, such as Advanced Joystick Steering in the WA500-8 wheel loaders, are a result of customer input, noted Rich Smith, Vice President, Product and Services Division. “Customers often share ideas on how they can use the machines in ways we had not considered,” said Smith. “One of the benefits is that we are taking this information and driving it back into our development processes.”



Rich Smith recalls seeing the first aftermarket, grade-control systems on dozers. “I remember ... thinking that those masts and cables are going to get ripped off, figuratively and literally. Komatsu solved that by integrating grade control into the machines.”

potentially much more. The possibilities are virtually limitless. Again, customers want to be productive and profitable, and we’re implementing ways to further help them from both machinery and support standpoints. Komatsu aims to be their total solutions provider. ■



CELEBRATING 20 YEARS

OSUIT Komatsu training program develops technicians through classroom, hands-on experience



Mike Hayes,
Komatsu Director
of Distributor
Development

Komatsu recently earned an award from The AED (Associated Equipment Distributors) Foundation for its efforts in promoting education, something the company has been committed to for decades. The Komatsu Advanced Career Training (ACT) program at Oklahoma State University Institute of Technology (OSUIT) – celebrating its 20th anniversary – is a shining example of this dedication.

“The program gives students the skill set they need to become successful technicians and work on heavy equipment, specifically Komatsu machinery,” said Mike Hayes, Komatsu Director of Distributor Development. “Komatsu supports the program by providing machinery, componentry, and technical information, the latter of which includes the latest diagnostic tools.”

Dylan Brown and other students in the Oklahoma State University Institute of Technology program get hands-on training on campus and work in their sponsoring distributor’s service department. “The program gives students the skill set they need to become successful technicians,” said Mike Hayes, Komatsu Director of Distributor Development.

▶ VIDEO



Students in the program are recruited by Komatsu distributors who sponsor their education. Distributors often give financial assistance toward education costs, including tool incentives, as well as other support. After successfully completing the program, all students are guaranteed a job with the sponsoring distributor, and their education continues through company and manufacturer training.

“We believe the Komatsu ACT program at OSUIT is the oldest partnership of its kind,” explained Hayes. “It definitely has the longest history on the OSUIT campus. Students learn the fundamentals, and once they are on the job, they further their training and skills. Eventually, they could move into management at the dealership using their formal education and trade skills.”

On campus, in the shop

Komatsu ACT students divide their time between OSUIT and the sponsoring distributor. During each 16-week semester, students spend eight weeks on campus, where they receive classroom and hands-on basic training in hydraulics, electrical systems, engines and more. The balance of the semester is spent in a service department at one of the branch locations of their distributors to utilize the skills they learned in the classroom.

“I was a technician, and I wish there was a program like this when I started,” said OSUIT Instructor Hector Garrido-Guevara. “It’s a great way for students to learn about systems and machinery and then apply their classroom knowledge in real-world settings. That is invaluable.”

Students graduate with an Associate of Applied Science in Diesel & Heavy Equipment,



(L-R) Instructor Hector Garrido-Guevara looks on as students Roby Herchenhahn and Christian Harris perform a lab in the OSUIT Komatsu ACT program. "I was as a technician, and I wish there was a program like this when I started," said Garrido-Guevara. "It's a great way for students to learn about systems and machinery and then apply their classroom knowledge in real-world settings. That is invaluable."

Komatsu ACT Technology degree. The program totals 87 credit hours. In addition to classes specific to Komatsu, students take courses in math, writing and history.

Terryl Lindsey, who is Dean of the program, has been at OSUIT nearly 25 years and was an instructor in the Komatsu ACT program at its outset. "Twenty years ago we had a hodgepodge of componentry and no equipment. Today, we have an excellent selection of parts and components, such as hydroshift transmissions, that students can work with as well as several pieces of machinery. Komatsu and its distributors continue to show a strong commitment to the program, and that's made it a huge success."

Proof in the numbers

Student Dylan Brown recently graduated from OSUIT Komatsu ACT. He said the hands-on opportunities in the classroom and during the half of each semester spent in one of his sponsoring distributor's shops were his favorite parts of the program.

"I went from no knowledge of construction machinery systems to being able to work on my own or with a mentor if I need to," shared Brown. "There is no substitute for actually working on a component or a machine. For example, advanced labs included seeing the inner designs of travel motors and final drives. That has real-world application because I have seen it in the dealer's shop."

In addition to earning an associate degree, students who have finished the program since 2011 also receive their first-level technician career-path certificate recognizing them as Certified Komatsu Technicians. Beyond the core credit hours at OSUIT, students complete the Komatsu Virtual Campus (KVTC) online training courses, one new-model course and two years of employment, which are required for this level of certification.

"Graduates of this program often earn six-figure salaries within a few years," reported Hayes. "That's an obvious benefit for them. The distributors see a terrific return-on-investment because they are getting a proficient technician. Ultimately, that's good for customers because they can rely on dealers to have skilled, experienced personnel who can diagnose and fix machinery with minimal downtime."

Lindsey said that's been the focus from day one. It's why the program took off, grew and remains a model of success.

"We have an 85-percent graduation rate, and 99.8 percent of students who complete the program are hired full-time when they complete the program," noted Lindsey. "Because Komatsu distributors sponsor them, most students leave with little to no debt. Our follow-up data show that five years after graduation, 80 percent are still with the distributor from their internship. This program works; we have a 20-year history that proves it." ■



Terryl Lindsey,
Dean



Hector
Garrido-Guevara,
Instructor



'EDU-TAINMENT'

Heavy-equipment camp encourages young people to learn about construction jobs



Odessa Perry,
Career Development
Coordinator

With a severe skills gap facing the American construction industry, targeting and cultivating the next generation of potential employees is imperative to its success. The worker shortage will have serious consequences, if not addressed.

Warren County High School Career Development Coordinator Odessa Perry knows this and began looking for opportunities to educate her Warrenton, N.C., teens about careers in the construction industry. With students and administration onboard and a grant from the North Carolina Department of Transportation (NCDOT) in hand, she turned to Extreme Sandbox and Komatsu to make the experience happen.

"In 2014, our district created four high school career academies, and engineering construction technology is a specific area,"

explained Perry. "This year, we received an NCDOT grant to take a trip that would allow our kids to learn more about equipment and the industry. We're so grateful this worked out the way it did."

In late April, Perry and 40 students boarded a bus and made the 20-hour trip to Minnesota to take part in Extreme Sandbox's heavy-equipment camp, a full day of hands-on training with Komatsu equipment and information sessions about careers in the construction industry.

Closing the skills gap

"Our heavy-equipment camps are geared specifically for high school students," said Extreme Sandbox Owner Randy Stenger. "They are a great opportunity for the kids to get in machines and gain a better understanding of these types of careers. We try to educate and entertain them. We call it edu-tainment. We're a fun company, but we're also committed to strengthening the industry. The skills gap is real, and days like this are a great first step to closing it."

Thanks to a partnership between Extreme Sandbox and Komatsu, the students could operate a pair of D61PX dozers, two PC35MR and two PC210LC excavators as well as two WA270 wheel loaders. Representatives from the local Komatsu distributor were also on-hand to host interactive demonstrations with a service truck and meet with students.

"This was an experience that will stick with these kids for a while," stated Perry. "It was such a great opportunity for them. Extreme Sandbox and Komatsu went above and beyond for us, and we are so thankful." ■



Randy Stenger,
Owner

Extreme Sandbox Owner Randy Stenger (left) provides direction to a Warren County High School student operating a Komatsu PC35MR excavator at a heavy-equipment camp. Students from Warren County High School traveled 20 hours to the Hastings, Minn., facility thanks to a grant from the North Carolina Department of Transportation.

▶ VIDEO



AEM MOTTO: #TIMETOBUILD

Association gives four reasons why Congress should tackle infrastructure issues now

This year's nationally recognized Infrastructure Week in May couldn't have been better timed. President Trump continues to emphasize the importance of upgrading U.S. infrastructure, and members of Congress on both sides of the aisle are eager to tackle this vital issue. As this year's Infrastructure Week theme suggested, now is the perfect #TimetoBuild. The Association of Equipment Manufacturers (AEM) recently joined with dozens of other organizations and hundreds of individuals to take the message to Capitol Hill.

Time to act

Here are four reasons (in no particular order of importance) why this is an opportune time to pass meaningful legislation to upgrade and modernize the U.S. network of roads, highways, bridges, waterways, locks, dams, underground-utility infrastructure and broadband.

We know we have a problem. The sad state of U.S. infrastructure has been amply litigated. The case for investment and action has been made and supported with economic impact studies, report cards and warnings of what will happen if we don't act. In the arena of Capitol Hill and public debate, the issue is settled. U.S. infrastructure needs help.

The American public wants action. AEM conducted a national poll last summer that showed U.S. voters overwhelmingly support increased federal investment in the nation's infrastructure. Subsequent surveys indicate that prioritization has not wavered.

Infrastructure is bipartisan. Infrastructure continues to serve as a unifying priority for Republicans and Democrats, as well as among the administration, the U.S. House and the U.S.

Senate. While lawmakers may not agree on much these days, infrastructure modernization is an opportunity for bipartisan consensus and progress.

The infrastructure tech revolution is here. As was on full display in the Tech Experience at CONEXPO-CON/AGG, and is demonstrated by AEM's Infrastructure Vision 2050 and Thinking Forward initiatives, technology is driving the future for everything related to infrastructure. We must get ready to embrace and adapt to the rapid pace of innovation around how we move people and goods.

Now is the time to remind your state and federal legislators about how important it is to upgrade and modernize U.S. infrastructure. Through efforts such as personal visits to lawmakers, participation in policy discussions and writing op-eds, we will continue to remind legislators that it's always the perfect #TimetoBuild. ■

Kate Fox Wood, AEM Campaign Director, Infrastructure Vision 2050, outlines four reasons why now is the time to focus on infrastructure, including the public's desire for action and bipartisan support among lawmakers.



Kate Fox Wood,
AEM Campaign
Director,
Infrastructure
Vision 2050



NEW AGC RECOMMENDATION

Construction companies are encouraged to hold safety talks after lunch breaks



Stephen E. Sandherr,
AGC Chief
Executive Officer

A new study from the Associated General Contractors of America (AGC) dispels the belief that most construction-related fatalities occur in the morning. In fact, noon is the deadliest hour, according to the association, which now recommends that companies hold safety talks and stretching sessions when workers return from 11 a.m. to noon lunch breaks, which are common on most jobsites.

AGC conducted the study during a three-year period in association with the Myers-Lawson School of Construction at Virginia Tech University. Researchers looked at every construction fatality that occurred during that time frame, with an eye toward helping construction companies implement the most effective safety measures by understanding why, when and how fatalities occur.

“We all share a common goal – getting to zero construction fatalities,” said

AGC recommends that companies hold safety talks and stretching sessions when workers return from lunch breaks as a new study revealed that most construction fatalities occur during the noon hour. Additional findings reinforce existing safety practices and many of AGC’s longstanding safety programs.

Stephen E. Sandherr, AGC’s Chief Executive Officer. “This report offers the data and recommendations needed to help construction firms achieve that goal.”

The AGC released the study at a time when construction employment is rising in many areas. Recent data showed payrolls reached their highest level since 2008.

Reinforcing safe practices

Additional findings reinforce existing safety practices and many of AGC’s longstanding safety programs. For example, falls from ladders and other structures account for one-third of U.S. construction fatalities. This confirms a focus by both the association and the industry on offering training and safety stand-downs to address fall protection. Sandherr noted that AGC is now looking to establish new training programs designed to improve ladder safety.

The study also revealed that Hispanic workers are not disproportionately the victims of accidents, as some believe. As a group, Hispanics account for 24 percent of the national construction workforce and 25 percent of all construction fatalities. Sandherr said this finding was important because it indicates that construction firms need to craft safety programs targeting the entire workforce, rather than specific segments.

Sandherr added that AGC was sending the new safety report to each of its members, as well as to other construction associations and making it available online. “No wisdom or insight should be proprietary when it comes to the safety of construction workers,” he said. ■



SIDE TRACKS

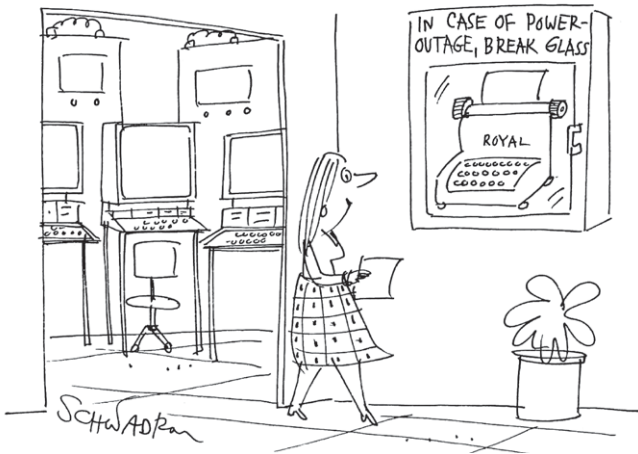
On the light side



"Do you want the truth according to Google, Yahoo, Wikipedia . . .?"



"Translate this into Legalese, Wilson. We want them to have to hire a lawyer to explain it."



Did you know?

- A flock of crows is called a murder.
- Movie trailers were originally shown after the movie, which is why they were called trailers.
- The left lung is smaller than the right in order to accommodate the heart.
- Cherophobia is the fear of happiness.
- The base of the Great Pyramid of Egypt is large enough to cover 10 football fields.
- Ten percent of the salt mined in the world annually is used for treating roads in America.
- Pig Beach in the Bahamas is uninhabited, except for approximately a dozen swimming feral pigs.
- The smallest bones in the human body are found in the ear.
- Q is the only letter in the alphabet that does not appear in the name of any U.S. state.
- The only rock that floats in water is pumice.
- Melting icebergs and glaciers make fizzing noises called Bergy Seltzer.

Brain Teasers

Unscramble the letters to reveal some common construction-related words. Answers can be found in the online edition of the magazine at www.CECPushingAhead.com

1. N I K L _ _ _ _ _
2. S A R E G E _ _ _ _ _ A _ _ _
3. D I R E S L _ _ D _ _ _ _ _
4. H E S O S _ _ _ _ _
5. L A S E D E _ _ _ _ _ L _ _ _

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