

Meet Me in St. Louis

The Gear Industry – and companies from the entire power transmission supply chain – will gather in-person at Motion + Power Technology Expo 2021

Randy Stott, Publisher & Editor-in-Chief

The Motion + Power Technology Expo (formerly Gear Expo), produced by the American Gear Manufacturers Association, will feature top manufacturers, suppliers, buyers and experts in the gear and mechanical power, electric power and fluid power industries when it comes to the America's Center Convention Complex in St. Louis, September 14–16, 2021.

Over three days, visitors will be able to shop the latest technologies in gear products and services on the show floor, network with customers, colleagues and peers in the many scheduled events, and take advantage of in-person education and training that are custom-designed for the gear and power transmission industry.



MOTION + POWER TECHNOLOGY EXPO

The Show Floor

Exhibitors will conduct demos, host information-rich seminars and offer up their technical expertise. As of July 1, more than 130 exhibitors had registered for booth space at the show, but show organizers are expecting more to finalize their plans as the country continues to open up and companies become more comfortable with travel in a post-lockdown world.

The exhibitors will include a wide selection of the leading suppliers to the gear industry, including all the major machine tool, cutting tool, workholding, inspection equipment and related technology providers. In addition, visitors will be able to speak with dozens of gear and gearbox manufacturers. On top of all that, the show is once again co-located with the ASM Heat Treat Show (see our additional coverage beginning on p. 30).

MOTION + POWER TECHNOLOGY EXPO

SEPTEMBER 14–16, 2021

ST. LOUIS, MO

MOTIONPOWEREXPO.COM

Networking Events

MPT Expo and ASM Heat Treat combine to offer a number of scheduled opportunities for professional networking.

Opening Night Reception

Tuesday, September 14, 5:00 p.m. – 6:00 p.m.

Free to registered attendees

Make new connections and say hello to old friends during an hour of networking, food, and drinks. The event is free for MPT Expo attendees and includes two drink tickets per attendee.

Young Professionals Reception

Tuesday, September 14, 6:00 p.m. – 7:30 p.m.

\$15/person

The Young Professionals Reception is open to all Motion + Power Technology Expo, the Heat Treat Conference & Exposition, IMAT, or Cold Spray attendees ages 40 and under.

AGMA and ASM are excited to announce the Young Professionals Networking Reception for all those business professionals 40 and under to attend. The evening will be a great opportunity for networking and industry discussion while enjoying food drinks and entertainment.

The Heat is On

Wednesday, September 15, 7:00 p.m. – 10:00 p.m.

\$85 for members; \$95 for nonmembers

The Heat is On at the Anheuser-Busch Biergarten! Join conference attendees from MPT Expo and ASM Heat Treat for a celebration of beer and food at this iconic and historic brewery. Attendees will also have the opportunity to tour the famous Clydesdale stables, historic brewhouse, and Beechwood aging cellars. Transportation provided from the convention center.

Education and Training

Why Bearings are Damaged

Tuesday, September 14, 8:00 a.m. – noon

ABMA

The American Bearing Manufacturers Association is offering this course on rolling element bearings for those involved in industrial equipment design, reliability, and maintenance. It will include a basic overview of rolling bearings, their selection, precision and mounting considerations, service life estimation, and

lubrication-related influences. A hands-on damage analysis session will be the featured portion of this program.

Modern Automated Gear Quality Assessment Technology

Tuesday, September 14, 8:00 a.m.–5:00 p.m.

William Mark McVea, KBE+, Inc.

This course is intended to provide you with a thorough understanding of the information contained within a typical gear inspection report. Specifically, we will look at the contents and meaning of the information contained within the gear charts, as well as the techniques used by the gear measurement system to assess gear quality. An explanation of basic gear measurement techniques, how measurement equipment and test machines implement these techniques, and how to interpret the results from these basic measurements will be covered. We will also discuss how to interpret the results and what corrective actions may be considered if the quality of a particular gear is unsatisfactory.

Design Basics for Spur and Helical Gears

Wednesday, September 15, 8:00 a.m.–noon

Terry Klaves

Learn how to develop and understand gear drive application specifications and target performance expectations. Review, select and calculate basic gear terminology variables and design parameters which define tooth bending and contact rating safety factors. Learn how to fit new gear design and ratio into

existing center distance. Use commercially available software to calculate and optimize gear set power density through application of profile shift, accuracy, material, and heat treatment. Review other gear design related factors of operating noise level, efficiency, lubrication and micro-pitting.

Basics of Gearing

Wednesday, September 15, 8:00 a.m.–5:00 p.m.

William Mark McVea, KBE+, Inc.

Dramatically improve your knowledge and productivity through Basics of Gearing. This course will be presented in a two-day format and will give you a comprehensive overview of standard gearing nomenclature, gear involute geometry, inspection procedures, and much more.

External Spur and Helical Gear Mesh Contact Analysis

Wednesday, September 15, 1:00 p.m.–5:00 p.m.

Terry Klaves

Evaluation of loaded tooth contact and development of tooth modifications using commercially available software to improve Khb and optimize power density. Two real-life gearing examples will be presented in the course, one will have a cantilever mounted pinion, the other a shaft pinion straddled non-symmetrically by bearings. Both examples demonstrate component deflections under load which significantly reduce tooth mesh contact which is then corrected with developed helix and profile modifications.

All The Gear Cutting Tools You Will Ever Need Are Right Here DTR is one of the world's largest producers.

DTR. Your best choice for high quality gear cutting tools.

DTR is a world class supplier of the finest high performance long-life gear manufacturing tools, for small and large gear cutting applications. Established in 1976, we are one of the world's largest producers of cutting tools, shipping to over 20 countries.

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- Chamfering and Deburring Tools
- Broaches
- Master Gears

We can produce virtually any tool you need for auto, aerospace, wind, mining, construction and other industrial gears.

Every tool is precision-made utilizing high speed steel, premium powder metal or carbide and the latest in coatings, to achieve superior cutting and long life. DTR uses top of the line equipment including Reischauer CNC grinders and Klingelnberg CNC sharpeners and inspection equipment.

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MOTION + POWER
TECHNOLOGY EXPO
BOOTH #2913

DTR has sales territories available. Call for more information.

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Basics of Gearing

Thursday, September 16,
8:00 a.m. – 5:00 p.m.

William Mark McVea, KBE+, Inc.

Dramatically improve your knowledge and productivity through Basics of Gearing. This course will be presented in a two-day format and will give you a comprehensive overview of standard gearing nomenclature, gear involute geometry, inspection procedures, and much more.

Education & Training Pricing	Early Bird Member	Early Bird Nonmember	Regular Member	Regular Nonmember
Basics of Gearing	\$795	\$850	\$895	\$995
External Spur and Helical Gear Mesh Contact Analysis	\$295	\$350	\$395	\$450
Materials Selection and Heat Treatment of Gears	\$495	\$550	\$595	\$650
Modern Automated Gear Quality Assessment Technology	\$495	\$550	\$595	\$650
Why Bearings are Damaged	\$295	\$350	\$395	\$450

Materials Selection and Heat Treatment of Gears

Thursday, September 16, 8:00 a.m. – 5:00 p.m.

AGMA and ASM

Because of their unique contribution to the operation of so many machines and mechanical devices, gears have received special attention from the technical community for more than two millennia. New developments in gear technology, particularly from the materials and heat treatment perspectives, have improved gear performance. This course, development jointly by AGMA and ASM International, will provide an overview of materials selection and heat treatment of gears. Topics covered include: Gear material selection, heat treatment, material hardenability, allow steel selection, gear failure concerns, manufacturing considerations, material form, cast iron, powdered metal, bronze and brass, and plastics.

Solutions Center

Don't miss these special FREE presentations right on the show floor. The Solutions Center is located in booth #3837, and additional presentations will be added as we get closer to the show. Two of the sessions include a focus on the global vehicle outlook with featured customer preference vs. market direction, and discussions of EV innovation, supply chain, disruptive forces, key partnerships, standardization, trade and more. Solutions center speakers will include:

- Joseph McCabe, CEO of AutoForecast Solutions LLC. With decades of industry experience and knowledge, McCabe provides production forecasting and advisory services to the global automotive community.
- Casey Selecmen, a 20+ year expert in powertrain forecasting. Selecman focuses on helping companies navigate industry risk and opportunities by using critical market intelligence to give them an edge in their strategy and business planning efforts.

Gear Technology and Power Transmission Engineering—Booth # 2813


Our magazines will be featured as part of the AGMA booth, #2813. We look forward to seeing you there. Our editors will be on hand to discuss article ideas and trends in our industry. We'll also help you renew or begin a free subscription, or answer any questions you might have about advertising—in print, online or via one of our e-mail newsletters.

Watch Out for Roaming Editors!

This year our editorial team will be taking its show on the road. At MPT Expo, we'll have a roaming video crew shooting interview segments for *Gear Technology TV* and *Power Transmission Engineering TV*. If you'll be at the show and you have any new technology you'd like to have featured, or if you have other news or opinions you'd like to share, please contact us to set up a time for our crew to meet with you (e-mail Randy Stott, Editor-in-Chief, at stott@agma.org).

More Information

Look for additional extended coverage in the August 2021 issue of *Gear Technology*; the August and September 2021 issues of *Power Transmission Engineering*; and the 2021 MPT Expo Show Guide, which will include complete booth listings, as well as articles about exhibiting companies. In addition to being distributed in person at MPT Expo, the *Show Guide* will also be distributed by e-mail on Sept. 1 to anyone who is a subscriber to the *Gear Technology* e-mail newsletter (sign up or renew today at geartechnology.com).

To register for the show or any of the related networking or educational events, visit: 

motionpowerexpo.com