

2022 AGMA Technical Committee Activity

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Thanks to our many hardworking volunteer committee members, 2022 was a productive year for the AGMA Technical Division with the publication of two new and three revised information sheets. The AGMA Metallurgy & Materials committee finally published their long awaited revision of AGMA 923-C22, Metallurgical Specifications for Steel and Cast Iron Gearing, which defines metallurgical acceptance criteria for three quality grades used in multiple other AGMA standards. AGMA 925-B22, Effect of Tribology and Lubrication on Gear Surface Distress, published by the AGMA Helical Gear Rating committee, took seven years to publish and has more than double the content from the previous edition. The AGMA Bevel Gearing committee followed with their revised AGMA 929-C22, Calculation of Bevel Gear Top Land and Guidance on Cutter Edge Radius, which has expanded calculations to anywhere along the face width instead of just the toe, mean, and heel. The AGMA Gear Accuracy committee finally closed the book on their long awaited the new document, AGMA 943-A22, Tolerances for Spur and Helical Racks, which fills a gap in the AGMA catalog, being the first document to cover spur and helical rack tolerancing since the withdrawal of AGMA 390.03a in 1999. And last, but certainly not least, AGMA 955-A22, Guidance for Industrial Gear Lubrication, published by AGMA Lubrication committee, was created as the first step of separating ANSI/AGMA 9005-F16 into two documents addressing “lubricants” and “lubrication.”

Looking ahead to 2023, many AGMA technical committees plan to meet face to face for the first time since 2019, and they will continue work on ten projects.

AGMA Technical Committees and the scope of their activities.

» Where to find information:

Technical Committees section of the AGMA website

agma.org

» Join AGMA technical committees Ask questions about standards and information sheets

Contact the AGMA Technical Division

tech@agma.org

The current list of active AGMA projects is:

- AGMA 919-2, Condition Monitoring and Diagnostics of Gear Units and Open Gears: Part 2—Applications and Advanced Analysis
- AGMA 926, Recommended Practice for Carburized Aerospace Gearing
- AGMA 947, Gear Reducers—Thermal Capacity Based on ISO/TR 14179-1
- ANSI/AGMA 1012, Gear Nomenclature, Definitions of Terms with Symbols
- ANSI/AGMA 2101, Fundamental Rating Factors and Calculation Methods for Involute Spur and Helical Gear Teeth
- ANSI/AGMA 2116, Evaluation of Double Flank Testers for Radial Composite Measurement of Gears
- ANSI/AGMA 6008, Specifications for Powder Metallurgy Gears
- ANSI/AGMA 6011, Specification for High-Speed Helical Gear Units
- ANSI/AGMA 9000, Flexible Couplings—Potential Unbalance and Mass Elastic Properties (and its metric version ANSI/AGMA 9110)

AGMA technical committees are also the vehicle through which U.S. companies can be involved in international ISO gear standards.

ISO published five new documents in 2022:

- ISO 10825-1:2022, Gears—Wear and damage to gear teeth—Part 1: Nomenclature and characteristics
- ISO/TR 10825-2:2022, Gears—Wear and damage to gear teeth—Part 2: Supplementary information
- ISO/TS 6336-20:2022, Calculation of load capacity of spur and helical gears—Part 20: Calculation of scuffing load capacity—Flash temperature method
- ISO/TS 6336-21:2022, Calculation of load capacity of spur and helical gears—Part 21: Calculation of scuffing load capacity—Integral temperature method
- ISO/TR 6336-30:2022, Calculation of load capacity of spur and helical gears—Part 30: Calculation examples for the application of ISO 6336 parts 1,2,3,5

ISO working groups also recently began meeting face to face again, which should speed up their document development.

In 2023 ISO working groups will continue work on the following twelve documents:

- ISO/DTR 10064-2, Code of inspection practice—Part 2: Double Flank Radial Composite Measurements
- ISO/DIS 10300-1, Calculation of load capacity of bevel gears—Part 1: Introduction and general influence factors
- ISO/DIS 10300-2, Calculation of load capacity of bevel gears—Part 2: Calculation of surface durability (pitting)
- ISO/DIS 10300-3, Calculation of load capacity of bevel gears—Part 3: Calculation of tooth root strength
- ISO/AWI TR 10300-30, Calculation of load capacity of bevel gears—Part 30: ISO rating system for bevel and hypoid gears—Sample calculations
- ISO/DIS 10828, Worm gears—Worm profiles and gear mesh geometry
- ISO/NP 14635-2, Gears—FZG test procedures—Part 2: FZG step load test A10/16, 6R/120 for relative scuffing load-carrying capacity of high EP oils
- ISO/NP 18792, Lubrication of industrial gear drives
- ISO/DIS 21771-1, Gears—Cylindrical involute gears and gear pairs—Part 1: Concepts and geometry
- ISO/CD 21771-2, Cylindrical involute gears and gear pairs—Part 2—Part 2: Calculation and Measurement of Tooth Thickness and Backlash
- ISO/AWI 23509-1, Bevel and hypoid gear geometry—Part 1: Basics principles
- IEC/AWI 61400-4, Wind turbines—Part 4: Design requirements for wind turbine gearboxes

The expert knowledge, meticulous attention to detail, and consensus-building skills of our volunteer members who work hard to develop the standards often go unnoticed in the background. The benefits of their work, however, are front and center to the gear industry and gear users every day. For all the valuable contributions of our committee members to help, the gear industry, and gear users everywhere, we thank you!

