

AGMA Standards Committees Keep Industry in Business

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More than 100 years ago, gear manufacturers were facing a significant challenge from industry. The incredible advances in industrialization and transportation that occurred at the turn of the 20th century resulted in incredible growth for gear makers, but there were significant technical issues. “The lack of process and product standardization was a continuing problem in all U.S. industry... the lack of industry-wide gear standards meant there were no standard gear tooth sizes, ratings, quality definition or consistent manufacturing methods” (*Celebrating 100 Years of Gearing*, pg. 22).

Generally, gear companies were making “unique gears to suit particular applications without concern for interchangeability... By 1916, the U.S. government was calling on the gear industry to create standards that would define gear type, tooth size, tolerances (quality) and manufacturing processes. This would minimize the risk of monopoly, and allow for greater availability of interchangeable gears from multiple sources to meet market demands and national security needs” (*Celebrating 100 Years of Gearing*, pg. 22).

Under these industry challenges, AGMA was created, and with it, the AGMA Technical Division.

What does the AGMA Technical Division do? What value does being an AGMA member, and supporting this effort, deliver to industry?

In short, AGMA Technical Division helps the industry deliver state-of-the-art power transmission products to their customers. It does that by bringing together industry experts to collaborate and develop standards that function as a common language for use by the gear manufacturers and users to evaluate various gear products. These standards provide a reference point for the reliability and performance of a product based either on design or application. The standards development process also provides a forum for scientific discussion of

product design, materials, and application, which often leads to better product design. In addition, standards are also used as a marketing tool by manufacturers, either in penetrating new markets or protecting established markets.

A brief history of AGMA standards development

Ever since the first AGMA rating standard, developed in 1919 shortly after AGMA’s creation, the development of AGMA standards has always been market driven. The AGMA board of directors, in keeping with the increasingly global nature of the gear marketplace, constantly reaffirms the association’s long-term commitment in promoting technical excellence through the national and international standards writing process.

In the 1980s, the American National Standards Institute (ANSI) approved AGMA as the accredited national standards development body for gear related standards. Also, AGMA was approved as the administrator of the ANSI Technical Advisory Group which establishes the American national position on international gear standards.

Another milestone was achieved in 1993 when AGMA, through ANSI, was approved as the Secretary of Technical Committee 60 (TC 60), Gears, by the International Standards Organization (ISO) in Geneva, Switzerland. Therefore, AGMA is now responsible for the administration of gear related standards development worldwide.

But how does AGMA really do this?

As noted earlier, the detailed content of AGMA documents (standards and information sheets) are developed by volunteer industry experts acting as committee members. Currently, there are 22 active technical committees with more than 250 industry experts from more than 135 AGMA member companies worldwide. These experts come from



not only gear manufacturers, but also users of power transmission equipment, suppliers to the industry, academia and government. The rules under which they operate have been prudently established to obtain a clear consensus among the committee members, and also the public at large, who are given the opportunity to review and constructively critique the content prior to final adoption.

To facilitate its standards development activities, AGMA annually holds approximately 135 committee meetings, of which 70 percent are held via WebEx with the rest held face-to-face at locations easily reachable by a majority of the committee members.

AGMA has always relied on the dedication and valuable contributions of its members participating in technical committees. Our members have found their participation in the technical committees beneficial in more ways than one. Aside from the direct benefit gained through the application of developed standards and information sheets, our members have used their involvement in the committees to interact with and learn from their counterparts from around the industry. Thanks to the internet and the ability to hold virtual meetings, involve-

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ment in the activities of these technical committees is no longer geographically bound to a single location. Holding meetings online allows AGMA members from Europe, South America, India and other parts of the world to attend and collaborate with their colleagues on various issues without travel expense or time away from the office.

The current AGMA publication catalog includes 56 Standards and 31 Information Sheets. The catalog also includes four adopted ISO

Technical Reports (equivalent to AGMA Information Sheets) and six ISO Standards.

In 2016, these committees and AGMA's Technical Division produced the following updated Information Sheets and Standards:

1. ANSI/AGMA 9005-F16, *Industrial Gear Lubrication*
2. ANSI/AGMA 9006-A16, *Flexible Couplings – Basis for Rating*
3. ANSI/AGMA 2002-C16, *Tooth Thickness and Backlash Measurement of Cylindrical Involute Gearing*

4. ANSI/AGMA 6013-B16, *Standard for Industrial Enclosed Gear Drives*
5. ANSI/AGMA 6113-B16, *Standard for Industrial Enclosed Gear Drives [Metric Edition]*
6. ANSI/AGMA 6123-C16, *Design Manual for Enclosed Epicyclic Gear Drives*

AGMA Welcomes Support

As mentioned earlier, currently more than 135 member companies, consultancies and universities from around the world actively participate on at least one technical committee.

We strive to increase participation on our technical committees to *all* AGMA membership. We invite those members not currently active on an AGMA committee to "dial-in" to an up-coming online meeting and see how easy it is to get involved. As a standards developing organization, we believe increased participation from a large group of diverse companies will improve and ensure wider acceptance of the final product, which is the AGMA standard.

AGMA Welcomes Non-Members to Join AGMA and Drive the Future

AGMA encourages companies to join and actively participate in the standards development process. Members receive all of the standards for free (a value of \$3,750 for non-members who pay for the standards via www.agma.org).

But most importantly, joining AGMA means you are standing up for the industry and helping ensure another 100 years of technical excellence and advancement for the gear industry. Consensus-driven standards are the most important tool that AGMA delivers to the industry, and we look forward to continuing that tradition with our current members and future members helping to add value. ⚙️

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