Applied Geometrics Inc.

Fundamentals of Geometric Dimensioning & Tolerancing (GD&T)

Per ASME Y14.5-2009

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Forward

This text covers the fundamental concepts and rules of GD&T per the ASME Y14.5-2009 standard. What consists of fundamentals versus advance material is subjective. Applied Geometrics covers what many will consider the fundamentals such as the 14 geometric symbols, shapes of tolerance zones, and material modifiers for tolerance zones. Naturally, basic understanding of datum theory is also covered. This text also covers some significant details in each of these areas not always found in a GD&T fundamentals course. Applied Geometrics provides extensive discussion about the reality of GD&T with special regard to datum features, common mistakes made when applying GD&T and most importantly why.

Applied Geometrics has written this text to use the same language found when reading the ASME Y14.5-2009 standard. This greatly facilitates reading the actual standard for further study after completing this program.

Ultimately, three fundamental concepts are what Applied Geometrics wants each reader to understand in detail. Those concepts are understanding datum theory and reality, rule #1 (perfect form at MMC or LMC), and the material modifiers (MMC/MMB, LMC/LMB, and RRS/RMB) including the how, when and why of each concept.