

# Tolerance Stack-Up Analysis

## 2-Day Seminar

(~16 hours of instruction; 1.6 CEU's)

### Course Description

This two-day course is an *advanced* Geometric Dimensioning and Tolerancing (GD&T) program focusing on tolerance accumulation analysis. This course uses the American Society of Mechanical Engineers (ASME) Standard Y14.5.

### Objectives

1. Introduce the most important and most widely utilized concepts of the ASME Y14.5 standard, such as Simultaneous Requirements, effects of Bonus Tolerance and Datum Mobility.
2. Enable participants to calculate minimum and maximum tolerance accumulations when ASME Y14.5 control symbols appear on drawings.
3. Continue preparing the participants for the ASME GDTP certification exams.

### Benefits/Reasons to Attend

If you have been through the Fundamentals and Advanced GD&T levels, and have responsibility to determine the cumulative effects of tolerances, this is the course for you. This program is an extrapolation of your education in the ASME Y14.5 standard. In this program, we focus on the effects of GD&T-specified tolerances to features, parts and assemblies.

*AGI is dedicated to continuing service. Our concern is that the individuals we teach actually retain that which their companies and we have worked so hard to present. This is precisely why we offer, for each participant of any AGI seminar, access to an ASME GDTP Senior certified instructor who will be available to answer follow up questions after the course via e-mail or phone.*

### Program Outline

The program begins with a review of basic and advanced GD&T concepts, then continues with practical team exercises designed to educate each participant in how to properly determine the worst-case effects of specified tolerances. The class format is a minimum lecture, maximum experience and participation.

### Subject matter covered (as a minimum):

- Introduction - Objectives, review of GD&T principles and their effect on tolerance accumulation
- Review of the most complex controls and rules, including Bonus Tolerance and Datum Mobility
- Tolerance stack-up analysis
- Review of actual prints (participant and instructor supplied.)

### Who Should Attend

This program is designed for anyone who is extremely familiar and proficient with the concepts and practices of GD&T. Particular emphasis is placed on those who are responsible for specifying, and analyzing tolerances. Individuals desiring to become a certified Geometric Dimensioning and Tolerancing Professional (GDTP) by passing the ASME GDTP exam should take this course.

### Prerequisites

Fundamentals and Advanced GD&T classes, or equivalent experience.