

Introduction to Tolerance Stack-up Analysis methodology

- Quick review of Basics of GD&T (~ 30 mins)
- Importance of Tolerance Stack-up Analysis: Why, when and how
- Introduction of Two-Column method of doing stack-up analysis
- Introduction to Tolerance Stack-up Analysis:
 - Coordinate dimensioning and tolerancing stacks
 - GD&T stacks
 - Worst case stacks
 - Statistical tolerancing stacks: RSS and MRSS
- Methodical steps involved in any stack-up analysis:
 - Loop diagram creation
 - Universal sign language of tolerance stack-up analysis
 - Identification of correct dimensional contributors (vectors)
 - Correct stack table filling according to Two-column method
 - How to convert and enter various geometric tolerances into the stack table
 - Drawing improvements to reduce adverse impact on tolerance stack

Part Level Stack-up Analysis

- Part stack using coordinate dimensioning and tolerancing
- Part stack using position
- Part stack using bi-lateral profile
- Part stack using circular runout
- Part stack using total runout
- Part stack using concentricity tolerance
- Part stack using symmetry tolerance
- Part stack using position with bonus (planar & RFS datums)
- Part stack using position with bonus tolerance (MMC)
- Part stack using form controls applied to a feature
- Part stack using orientation control applied to a feature without size
- Part stack using orientation control applied to a feature of size (FOS)

Assembly Level Stack-up Analysis

- Assembly stacks using coordinate dimensioning and tolerancing
- Assembly stacks using position (Floating fastener assembly stack)
- Assembly stack using bi-lateral profile
- Assembly stack using circular runout
- Assembly stack using total runout
- Stack using form controls applied to a feature
- Stack using orientation controls applied to a feature without size
- Stack using orientation controls applied to a feature of size (FOS)
- Introduction to Statistical Tolerancing:
 - RSS (Root Sum Square) stack concept
 - MRSS (Modified Root Sum Square) stack concept
- Comparison between Worst-case method, RSS & MRSS methods
- Assembly stack using statistical tolerancing

Contact

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Thank You !