TOPTECH
on
TOLERANCE STACK UP ANALYSIS

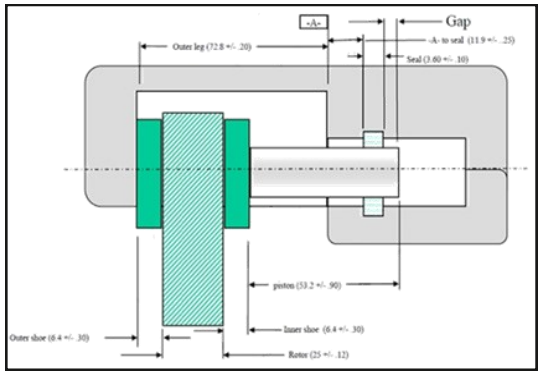
Conducted by

Mr. S. Shanmugam

Managing Director, DDIPL

on

23rd & 24th November 2018



Organized by

SAEINDIA
SOUTHERN SECTION

Event Champion : Mr. D. Balaji

Speaker

S. Shanmugam

Total 28 years' experience in product and process development. Oversee a thirty-member design group, providing design direction on products, parts and Components used in automotive, energy, medical devices, defence and aerospace, machine building, and semiconductor manufacturing. Managed all phases of the design process, including modelling, drafting, dimensioning, Tolerancing, prototyping and documenting results. Commended for strengths in defining, assessing and satisfying complex product functional specifications and manufacturability concerns. Hands on experience in Geometric Dimensioning & Tolerance (GD&T), Tolerance stack-up analysis with adherence to ASME Y14.5 and ISO 1101. Performed 1D, 2D and 3D Tolerance analysis. Vast experience in 3D Tolerance stack Analysis using VisVSA. Analysed and suggested GD&T in existing drawings, Defined Datums, selected part as well assembly tolerances as per design intent. Lead evaluation and analysis of designs produced by direct reports.

Objectives

After successfully completing this course, you will be able to:

- Describe how virtual condition affects the assembly of parts
- Explain the importance of tolerance stacks and be familiar with the stack methods, the stack form, and the stack spread sheet
- Calculate part stacks using coordinate dimensions, run out and concentricity, bilateral and unilateral profile tolerances, multiple geometric tolerances, position tolerances at RFS and MMC, and datum references at MMC
- Calculate stacks using form and orientation applied to features and features of size

Course Content

1. What is Tolerance Stack up?
2. Why do we do stacks?
3. Grounding out parts for a given stack
4. Introduction to the two-column method, stack form, and stack path
5. Stacks using coordinates tolerances
6. Stacks using run out
7. Stacks using Concentricity
8. Stacks using Symmetry
9. Stacks using form or orientation controls applied to a surface
10. Straightness or Perpendicularity applied to a feature of size
11. Stacks using Tolerance of Position at RFS
12. Stacks using TOP with bonus tolerance
13. Stacks using TOP with bonus tolerance and datum shift
14. Stacks using Profile
15. Stacks using Profile and TOP and the term "Boundary"
16. Special case Stack Examples

Note: Registration starts at 8.45 AM

About the Course

This course teaches the user how to create tolerance stacks using the 'Two Column' method. The course teaches how to establish a stack path, ground out the parts, and create a stack using all geometric characteristics. Fundamental concepts of GD&T are reviewed when introducing each new characteristic. All examples and exercises include complete, detailed solutions.

Benefits of attending the Course

- Save money at the design stage
- Enable global sourcing
- Reduce drawing errors
- Increase productivity
- Increase part tolerances
- Assure that mating parts will assemble
- Eliminate scrap

Course prerequisites

In order to understand the course content, participants should have a good understanding of GD&T based on the ASME Y14.5 : 2009 Standard either through work experience or knowledge gained by participating in a course. Basic GD&T concepts will not be covered in this course.

Mode of payment

Demand Draft / Cheque in favor of **"SAE INDIA Southern Section Toptech"**, payable at Chennai.

Bank Account Number : 32506111653
Bank Name & Branch : State Bank of India, Kottur
MICR Number : 600002023
IFSC Code : SBIN0001669
PAN No : AABAS2734H

Who should attend?

This course is valuable for individuals who create or interpret engineering drawings, product and gage designers; process, product, and manufacturing engineers; supplier quality engineers / professionals; CMM operators; buyers / purchasers; checkers; inspectors; technicians; and sales engineers / professionals.

Registration fees

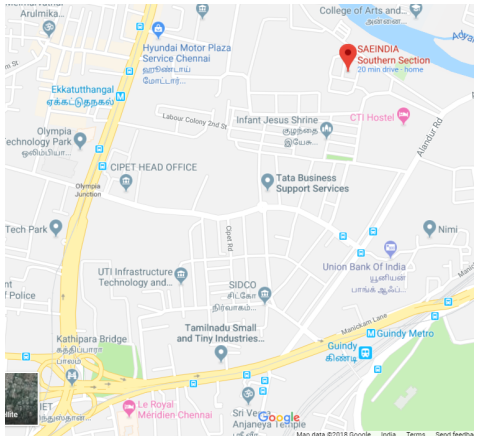
Rs. 13,000 + 18% GST per delegate for Non-SAEINDIA Member

Rs. 10,000 + 18% GST per delegate for SAE INDIA Member

Rs. 4,000 + 18% GST per faculty Advisor

Venue

SAEINDIA Southern Section *
Block-1, Modules: 29 & 30, SIDCO Electronic Complex , Thiru-Vi-Ka Industrial Estate, Guindy,
Chennai - 600032



*Subject to change based on registration

For Further Details

Visit: www.saeiss.org

TOPTECH
on
TOLERANCE STACK UP ANALYSIS

23rd & 24th November 2018
at
Chennai

We confirm the following will attend the above Seminar :

Name : .....

Designation: .....

Company: .....

Address: .....

.....

.....

Email: .....

Signature:

Please email/post the registration form duly filled, on or before 19th November 2018 to:

Programme Executive
SAEINDIA Southern Section
Block-1, Modules: 29 & 30, SIDCO Electronic Complex, Thiru-Vi-Ka Industrial Estate, Guindy,
Chennai - 600032
Phone: 044-42188651-52
Email: manager@saeiss.org