

Seminars For Engineers Presents in Association with Bolted Joint Engineering P.C.

A Statistical Approach to Bolted Joint Design

A Two Day Technical Seminar

www.SeminarsForEngineers.com/statistics

About the Seminar:

This two day seminar was developed to present detailed analysis techniques for engineers with responsibility for design and release of bolted joints. The seminar presents a system analysis approach combining rigorous engineering analysis with statistical techniques to accommodate variation in component geometry, material and process. The analytical process results in statistically quantified joint capacity for multiple failure modes, critical characteristics for the joint, and engineers who understand the system effects for their joints. Techniques presented in this seminar can be used to troubleshoot issues with existing joint designs, as well as assess and optimize upfront design alternatives. The seminar is presented in workshop format, with example problems analyzed during the session. Attendees should bring calculators. Those who prefer to analyze their own joint during the workshop should bring detailed design information (dimensions, tolerances, material properties, surface friction coefficients, torque specifications, load data, etc.)

Who Should Attend:

Engineers involved in the design, development or release of components that rely on the performance of quality bolted joints will find this seminar very beneficial. Any technical personnel who want to be able to statistically assess the performance of a bolted joint and optimize their design can benefit as well.

Benefits of attending:

- Obtain an increased understanding of how bolted joints function and how they fail to function
- Learn how to identify the root cause of joint problems
- Quantify the statistical limits of any joint's performance
- Balance geometry, material, and process to optimize joint performance

Course concepts:

- Joint types, purpose and failure modes
- Statistical joint analysis process
- Torque-tension calculations for standard and non-standard fastener types
- Load path analysis to calculate failure modes
- Clevis joint stiffness and joint closure
- Nubs and serrations to increase shear capacity
- Bolt fatigue
- Cone head fasteners
- Wheel attachment

info@SeminarsForEngineers.com