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Seminars For Engineers Presents in association with BTG Composites Inc.:

Composite Materials Failure Analysis & Repair

A Two Day Technical Seminar

SYLLABUS

Day One

- Overview of Composite Materials and Their Properties
- Composites vs. Metals (Required Properties and Differences)
- Micromechanics (Predicting Essential Composite Material Properties)

---------- Lunch ----------

- Laminated Plate Theory (LPT)
- Examples and Effective Properties of Common Materials
- Effects of Various Material Forms on Effective Properties
- Special Types of Laminates (Why They are Used, Their Importance and How to Define Them for Realistic Structures)

Day Two

- Failure Criterion for Advanced Composites (Methodology Approach, Types)
- Designing Composites (General Practices, Software Codes, Environmental Effects, Thermal Loads, Microcracking)
- Introduction to Finite Element Analysis (Broad Overview of FEA)
- Netting Analysis, Tapered Laminate Structures
- Various Examples

---------- Lunch ----------

- Joint Design Technology (Bolted Joints, Bonded Joints, Design Rules)
- Damage Scenarios for Composite Structures (Including Accept-Reject Criteria)
- Repair Methods and Approaches
- Summary & References, Resources

Note: Course outline subject to adjustments and modifications.

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