RPC® Pro Fatigue Tools

1 day course

COURSE OUTLINE

I. Data Classification
   - A. Algorithms in Comparison
   - B. RPC Pro Tools
     - a. Level-Crossing, Rainflow, Range Pair
     - b. Histogram Plotter
     - c. Histogram Accumulation

II. Damage Calculation
   - A. Damage Models – Stress Life
   - B. A–B Comparison
   - C. RPC Pro Tools
     - a. Material Editor – Stress Life
     - b. Project Options

III. Time History Based Damage
   - A. RPC Pro Tools
     - a. Damage Cycle
     - b. Damage Time History
     - c. Time History Plotter / Editor

IV. Damage Based Editing
   - A. Basics
     - a. Window Size
     - b. Tapering Options
   - B. RPC Pro Tools
     - a. Damage Time History
     - b. Statistical Region Selection
     - c. Region Combining
     - d. Cut
     - e. Auto Damage Editor

V. Damage from Histograms
   - A. RPC Pro Tools
     - a. Damage Histogram

VI. Fatigue in Applications
   - A. RPC Simulate Pro
     - a. Per-Iteration Damage
     - b. Project Options
   - B. RPC Test Pro
     - a. Per-Pass Damage (time history)
     - b. Per-Pass Damage (histogram)
     - c. Cumulative Damage (histogram)
     - d. Damage Limits

VII. Fatigue in Reports
   - A. RPC Pro Tools
     - a. Time History Report
     - b. Correlation Report Templates

This course provides an introduction to the cycle counting and fatigue damage calculation capabilities of RPC Pro. The course is targeted at beginning users and focuses on the more basic analysis methods and the operation of fatigue analysis tools and features.

Who should attend

Test operators, technicians or engineers who have basic familiarity with RPC Pro and wish to begin to use the fatigue capabilities within the software for damage calculation and editing. Typically offered as an add-on to the RPC Pro Software Operation course.

Prerequisites

» Basic understanding of fatigue concepts.

» Basic proficiency in operating RPC Pro software (as acquired by attending the “RPC Pro Software Operation” course, or through equivalent experience).