Fatigue Assessment with FEMFAT Weld Including Sensitivity Analysis

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Abstract

Variation in weld geometry cannot be avoided. Fatigue life is influenced by these variations in weld geometry. Whether a weld joint is critical to fatigue life or not depends on a few key factors and geometry parameters. Mr. Wolfgang Huebsch, from Magna Engineering Center Steyr in Austria, will take a detailed look at weld fatigue analysis sensitivities. He will introduce new sensitivity parameters that describe the influence of parameter variations on fatigue behavior and identify which geometry parameters need to be considered during the production process, depending on loading conditions. Extrapolation of fatigue results is possible for actual production conditions without extra effort.

Biography

Education:

1994 - 1999 Technical high school in Vienna, mechanical engineering

2000 - 2004 Microsystems technique and mechatronic engineering study at the University of Wr. Neustadt

Practice:

2004 - today MAGNA Powertrain, ECS/Technologie Zentrum Steyr

2004 - 2010 Structural mechanics/ Strength/ FE-Analysis. Project work including Finite Element and fatigue simulation in the branch of automotive-, truck-, and special industry applications.

05/10 - today Switch to the department of software sales and support

Publications:

From 2004 to 2010 several papers on international conferences for several topics, covering fatigue analysis with linear and nonlinear FEA.