

“Introduction to Fatigue and Durability Analysis”

Kurt Munson

Engineering Manager, HBM-nCode

Fatigue is often cited as a common form of operational failure in structures. Its nature is an apparently premature failure even though the stress levels are not high. This failure mode is driven by variation in stress, called fatigue cycles. This presentation will describe physics-based approaches used to understand both fatigue and fracture mechanics. It illustrates how the fatigue failure mode comes into play in the search for reliable products and safe structures. Discussion includes an overview of the SN cycle, rainflow cycle counting, cumulative damage theory, and fatigue life prediction.

Speaker Biography



Kurt Munson is the engineering manager at HBM-nCode where he oversees software technical support, training, and engineering services activities. He has 20 years' practical experience in structural testing and analysis, specializing in durability, fatigue, and vibration analysis. He holds a mechanical engineering degree from Michigan Technological University and a MS in mechanical engineering from the University of Washington.