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Endurica Launches New Tool for Fast Computation of Nonlinear, Multichannel Load History

Patented Interpolation Engine Enables Real-Time Analysis of Damage Development and Durability

Endurica LLC (Findlay, Ohio, USA) announces the release of the Endurica Efficient Interpolation Engine – Endurica EIE™. Endurica EIE™ is for engineers responsible for ensuring durability of rubber parts operating under multi-channel, variable amplitude load histories. Full load histories from on-road recordings, or from vehicle dynamics simulations can now be quickly analyzed to determine their complete impact on damage. Endurica EIE breaks past bottlenecks due to signal length and long computation time of finite element simulations of full load history. The method is almost as fast as linear superposition of unit load cases (a common method used for linear structures), but it is now valid for finite straining and nonlinear material behavior. Endurica EIE™ speeds up the calculation process so that a calculation that would have taken hours or days can be completed in seconds or minutes.

Endurica EIE™ uses Endurica’s patented method which automatically generates a small series of finite element solutions that together define a nonlinear map of the operating load space for the application. Once the map is generated, it can be used over and over to rapidly compute many variable amplitude load histories.

“We’re excited to get this tool into the hands of product developers, especially those with applications involving long histories and nonlinear behavior,” notes Dr. William V. Mars, Founder and President of Endurica LLC. “It’s not a stretch to say that it’s a game changer for automotive, aerospace, and offshore applications. Users of Endurica EIE™ work through a simple graphical user interface. They get unprecedented realism in their fatigue life calculations. They’re getting their analyses done faster than ever before possible.”

Endurica EIE™ is compatible, integrated and inter-operable with Endurica CL, Endurica DT, and fe-safe/rubber, all products developed by Endurica LLC.

[Endurica LLC](http://www.endurica.com) provides pre-prototype solutions for developers seeking durability in elastomer applications. Endurica is focused on durability and elastomers, and developed the world’s first numerical fatigue life solver for elastomers. Endurica’s solver is used to predict fatigue life based on the results of Finite Element Analysis. Solutions provided by Endurica LLC include software, characterization services, testing instruments, and training for engineers and analysts. Founded in 2008, Endurica is celebrating its 10th year of helping engineers to Get Durability Right.

MORE

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