WINNING ON DURABILITY

Endurica User SPOTLIGHT

AMC MECANOCAUCHO

Aplicaciones Mecánicas del Caucho (AMC) designs and produces anti- vibration mounts as well as noise insulation composites for industrial and building sectors. The firm's noise and vibration solutions include a comprehensive range of anti-vibration mounts based on rubber-metal, spring mounts, metal+ Sylomer® and wire rope mounts. AMC has been on the market since 1969, effectively reducing structurally-born noise and solving vibration problems.

Elastomeric elements are in AMC's wide range of anti-vibration mounts which include:

Annular	Cones	Marine
Blocks and Mats	Couplings	Noise Reduction
Bobbins	Diabolo	Spring
Buffers	Generator	Transformer
Bushings	Hood	Trapezoidal
Cabin	Levelling	

"Our customers value the strong technical service we provide. We get complex applications right when others are just guessing."

- Jon Irazustabarrena, Technical Manager

Endurica Value Add for AMC:

- Speed to market
- Product development risk reduction
- Cost reduction

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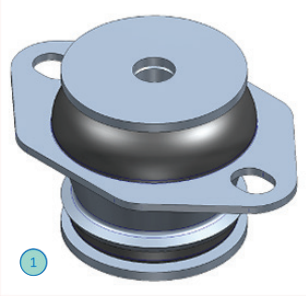
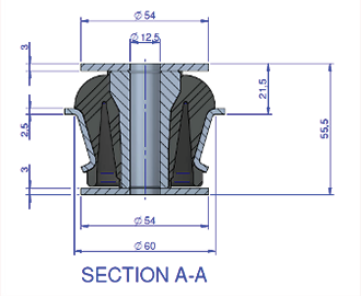
CLIENT DURABILITY REQUIREMENT

Vibration isolation for an engine in an agricultural application required careful selection of mount stiffness and damping properties, as well as proven durability under variable amplitude 3-axis load inputs. AMC differentiates their company through top-notch technical service and they ensured customer confidence with a full durability analysis taking into account actual part loading history. This analysis showed the AMC solution is superior to alternatives, and they quickly resolved a fatigue issue that was a huge pain point for their customer.

SOLUTION APPROACH





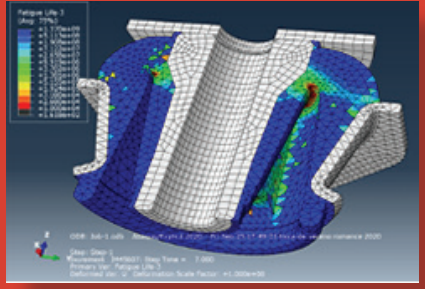
AMC engineers use the Endurica EIE™, CL™ and DT™ solvers to analyze the effects on durability of multi-channel load inputs recorded in the field by the customer. A nonlinear displacement-strain mapping is first generated using EIE and finite element analysis. Next, EIE converts the load history into strain history. Remaining life is tracked until end of life. Validation against customer field results have shown strong correlation, providing high confidence that AMC's innovative solutions will work as shown in the simulation.

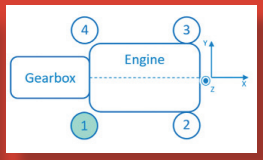
Endurica CL™

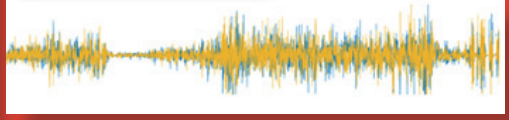
Endurica DT™

Endurica EIE™

Finally, Endurica CL™ computes fatigue life for the part, in terms of repeats of the given history. Or, if there are multiple load cases to consider, these are scheduled and applied using Endurica DT™, and the remaining life is tracked until end of life. Validation against customer field results have shown strong correlation, providing high confidence that AMC's innovative solutions will work as shown in the simulation.







AMC MECANOCAUCHO

"Our customers have many unique and complex applications, so our ability to quickly and confidently propose the right solution – and have it work on the first try – gives us a huge advantage. Endurica's training and tech support are great. After setting up our license, we were able to use the tools immediately. The fast and precise answers they give have allowed us to quickly and successfully apply the workflows we've needed."

– Ander Aldalur
Application Engineer

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