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M6x00420

Advanced Stress + FEA

Question 1

a) FEA can demonstrate the outcome of a product before it is manufactured. It can be used to understand the effect of forces, impacts, shocks, temperatures, vibration, friction, durability, stiffness and weight on the product.

By modeling a product in 3d and submitting it to the above conditions, FEA shows how they react to these conditions and it can highlight weak points or areas of concern or points where savings could be made.

~~By doing this instead of~~
Creating Prototypes (physical) can be expensive and/or time consuming. These prototypes ~~still~~ have be subjected to various conditions to simulate ~~at~~ what they have been manufactured for. A 3d model, once created, can be reused in testing over and over again with minimum time between tests.