Utilization of Mathcad Programs in the Aerospace and Defense Industry

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ABSTRACT

Engineering calculations are the backbone of product design - computing critical product parameters, analyzing test data, and predicting product performance. Virtually every design decision is informed by numerous calculations during each phase of the product development process. Yet, these calculations are not captured or managed as rigorously as the design geometry captured in CAD models. CAD tools, product data management, and product lifecycle management solutions capture and manage design geometry and the results of calculations, but they do not capture the full picture, which includes the equations and underlying assumptions.

In failing to solve and document calculations using standardized engineering tools and best practices, A&D organizations risk needless redesign and costly errors, while squandering intellectual capital. Mathcad is the standard for creating, sharing, and reusing engineering calculations in many aerospace companies.

Keywords: MATHCAD, CAD MODELS, CALCULATION, AEROSPACE, DEFENCE

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