

HyperWorks 소프트웨어의 생산기술 적용 방안

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HyperWorks : New Features & Manufacturing Works

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Abstract

HyperWorks is more than just a collection of high-end applications: it's an integrated engineering framework for maximizing product performance, automating processes and improving profitability within an open and flexible environment. Built from the core up to be programmable, automated and interoperable with all major commercial CAD systems and CAE solvers, HyperWorks enables innovation by providing high-end, value-based product design solutions within one common engineering environment.

Being able to assess manufacturing feasibility early in the design process can significantly cut downstream product development costs and material waste while maximizing production-floor efficiency. Bridging the gap between design and manufacturing, Altair has pioneered methods and software solutions to accurately simulate popular methods of manufacture including HyperForm for sheet metal forming and HyperXtrude for extrusion die design and process simulation. Altair HyperForm is a unique finite element based sheet metal forming simulation software solution. HyperForm combines an extremely fast one-step solver and incremental forming solution with the customized geometry manipulation and mesh generation capabilities of HyperMesh. HyperForm provides engineers at any stage of product design with quick, valuable, reliable information, reducing the overall product cycle. HyperForm's die module takes a giant leap in bringing the product designer closer to manufacturing by enabling engineers to create and analyze conceptual die designs in order to generate an optimized die. Die concepts can then be read into any CAD system as a starting block for the actual die build. Altair HyperXtrude is a finite element based simulation tool for analysis and design of aluminum extrusion dies and process. HyperXtrude accurately simulates the material flow and heat transfer during extrusion processes thereby allowing the user to significantly reduce die design time and costly die tryouts. HyperXtrude is developed to meet the needs of extrusion process/product design engineers. HyperXtrude is capable of solving both metal and polymer extrusion problems.

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