

SEER[®] Ply Cost Estimator

Composite Part Estimates Inside CATIA

SEER project estimation and management solutions improve success rates on complex development projects. Based on sophisticated modeling technology and extensive knowledge bases, SEER solutions help enterprises assess up-front project feasibility, optimize project costs and schedules, and assess risks and probabilities to achieve successful project outcomes.

SOLVING THE DESIGN TO COST CONUNDRUM

Designing and producing complex production-ready composite parts can be highly complex and expensive. Engineers often shy away from cost tradeoffs during the early stages of design because they don't have a way to easily quantify costs. However, the SEER-Ply Cost Estimator now puts the power of cost trades in the hands of engineers and cost analysts, generating cost estimates directly from within CATIA for your composite part designs.

QUALITY ESTIMATES, FASTER – CAD TO COST

Being able to estimate the cost of producing a design is a critical factor to organizations. For many companies, product costing is a fragmented activity calculated across multiple departments, using different levels of automation and different costing tools. Not only is this process expensive, time-consuming and error-prone, it also misses opportunities for design and manufacturing to work together as early as possible to expedite go/no-

go decisions and optimize design for manufacturability and production costs. The SEER-Ply Cost Estimator generates a comprehensive estimate from a CATIA solid model. Design engineers can obtain detailed composite part cost estimates for labor (setup, direct, inspection, and rework), material and tooling costs directly from and within their CATIA solid model.

COMPREHENSIVE COMPOSITE PART ESTIMATES

Covering processes such as:

- Ply Placement
- Debulking
- Core Preparation and Machining
- Panel Layup Hot Press Forming
- Curing (Autoclave, RTM, or VARTM)
- Trim after Cure
- Non-Destructive Testing
- Tool Prep
- Tool Cleaning
- Tool Fabrication and Design
- Material
- and more

Estimates are updated and refreshed as the design matures, so as the design changes shape, size, or materials, estimates can be quickly rerun to see the cost impact of those design changes. No longer is there a need to duplicate effort of taking design data and re-entering into cost models. Furthermore, the user may fully customize knowledge base templates and rules to fit their factory environments, labor rates and processes.

BRINGING TOGETHER WORLD CLASS SOLUTIONS

CATIA - Composites Design (CPD) is an advanced composites process centric solution that allows manufacturers, from

aerospace, automotive, shipbuilding or consumer goods companies, to reduce the time needed to design composites parts. It delivers tools to cover both the preliminary and detailed design phases while taking into account, even at the concept stage, the product's requirements for its manufacturability.

SEER for Manufacturing, the engine for the SEER-Ply Cost Estimator, was designed to enable both casual and advanced users to evaluate process options and tradeoffs impacting such factors as cost of manufacture and assembly, materials selected and the process being used. As with all SEER solutions, users can optimize their manufacturing strategy by performing extensive trade-off analyses – varying assumptions and options to determine which approach is likely to produce the best outcome.

"Using Galorath's SEER for Manufacturing within CATIA 3DEXPERIENCE processes will help companies perform early trade-off analysis on the use of various materials and composites processes before manufacturing even takes place.

This leads to finding out the most efficient way of manufacturing a product while meeting cost, performance, functionality and appearance requirements."

~PHILIPPE LAUFER, CEO CATIA,
DASSAULT SYSTEMES

Product Brief

ABOUT GALORATH

Galorath Incorporated has invested more than two decades developing solutions to help government and commercial organizations plan and manage complex projects. SEER solutions combine an intuitive interface, extensive project-applicable knowledge bases, sophisticated project-modeling technologies and rich reporting features to expedite the planning process and keep projects on track.

SEER solutions are employed by thousands of users worldwide in financial, manufacturing, high-technology and government institutions to obtain a rapid and powerful view of the critical factors driving program decisions and success.

ON TIME. ON TARGET.

- Create detailed composite part cost estimates for labor (setup, direct, inspection, rework), material, and tooling costs.
- Update and refresh estimates as the design matures through the manufacturing preparation design phase.
- Comprehensive composite part cost estimates covering processes such as Ply Placement, Debulking, Core Preparation and Machining, Panel Layup Hot Press Forming, Curing (Autoclave, RTM, or VARTM), Trim after Cure, Non Destructive Testing, Tool Prep, Cleaning, Tool Fabrication & Design, Material, and more.
- Create and save multiple estimate scenarios for each part to compare and trade options.
- Fully customizable knowledge base templates and rules to fit your factory environments, labor rates, and processes.
- Publish estimates as SEER cost models to be shared with SEER users for inclusion into other estimates.
- CATIA users can review the estimate, even if Ply Cost Estimator and/or SEER are not installed.

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