



CATIA PLM Express

CATIA - Composites Design

Productive process oriented environment dedicated to the design of composite parts from preliminary to engineering detailed design

Composite materials bring forth many new possibilities and high performance products. Designers need dedicated tools in order to fully benefit from the potential that composites offer. A global environment requires trouble-free collaboration for designers who need to take composite manufacturing specificities into account early on.

Overview

The CATIA - Composites Design option provides engineers with a collaborative and completely CATIA-integrated environment to rapidly create innovative composite parts for the aerospace, automotive and shipbuilding industries. By enabling designers to work concurrently on the same design and to embed composites manufacturing constraints earlier in the conceptual stage, this option drastically shortens design time.

Customer Benefits

- Fully integrated in the V5 environment
- Shortened composite part design time period (up to ten times faster)
- Fast plies generation from zones (automatic management of the ply staggering and stacking rules)
- Take into account manufacturing constraints early in the design phase
- True collaborative composites engineering environment enabling designers to work concurrently

Key Capabilities

Easy to use zone (geometry and laminate) and transition zones modeling definition

Easy access to material properties and attributes

Powerful ply modeling tools based on 3D features

- Composites Design allows the designer to focus on the design intent, by delivering highly productive ply generation from zone functions, with automatic management of the ply staggering and stacking rules. Hence, the design is natively compliant with company standards and know-how for composite parts design.

Complex geometrical configuration support
(monolithic and core stiffened panel, stiffeners, stringers)

Solid generation from zones and plies (exact solid) for digital mock-up review

Complete composites inspection tools

(core sample and numerical analysis, deviation and deformation analysis, ply table, etc.)

- Producibility checking enables users to predict how composites materials will behave on complex surfaces. Users can visualize fiber orientations, predict manufacturing problems, such as wrinkles or bridges, and take corrective action in the initial stages of design, eliminating costly change orders and ensuring a producible part.

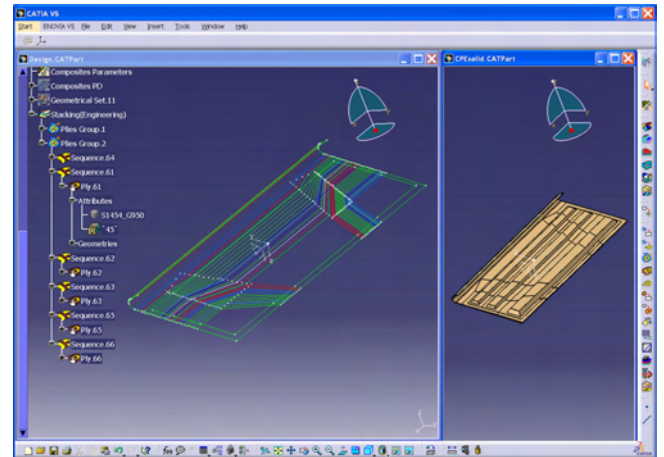
Best-in-class fiber simulation tools for early manufacturability assessment

Easy know-how and composites design features such as sharing and merging

Fully integrated in the V5 environment

takes advantage of the unequalled CATIA V5 offering to complete the composite design process (FEA, DMU, Machining, etc.), for instance:

- The specific V5 relational design change management capabilities use automatic updates to reduce the impact of changes to the design-to-manufacturing process. This ability avoids the need to restart the full design phase saving time and expenses



Screen capture of CATIA - Composites Design

- The ability to create and reuse rules instantiated in stacking sequences enables to take industrial standards and corporate know-how into account.

Visit us at www.3ds.com/my-catia-plm-express

About Dassault Systèmes

a world leader in 3D and Product Lifecycle Management (PLM) solutions, Dassault Systèmes brings value to more than 90,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes develops and markets PLM application software and services that support industrial processes and provide a 3D vision of the entire lifecycle of products from conception to maintenance. The Dassault Systèmes portfolio consists of CATIA for designing the virtual product - SolidWorks for 3D mechanical design - DELMIA for virtual production - SIMULIA for virtual testing and ENOVIA for global collaborative lifecycle management, including ENOVIA VPLM, ENOVIA MatrixOne and ENOVIA SmarTeam. Dassault Systèmes is listed on the Nasdaq (DASTY) and Euronext Paris (#13065, DSY.PA) stock exchanges. For more information, visit <http://www.3ds.com>

CATIA, DELMIA, ENOVIA, SIMULIA and SolidWorks are registered trademarks of Dassault Systèmes or its subsidiaries in the US and/or other countries. Copyright Dassault Systèmes 2002, 2006. All rights reserved. IGRIP®, QUEST®, IGRIP®, ULTRAARC®, ULTRAPAINT®, ULTRASPOT®, VIRTUAL NC® are registered in the US Patent and Trade Mark Office by DELMIA Corp. INSPECTTM is owned by DELMIA Corp. Pictures courtesy of ONERA-CAPECON Project

