

Product Synthesis

DMU - Engineering Analysis Review 2 (ANR)

CATIA V5R18

The screenshot displays the CATIA V5R18 interface. On the left, a 3D model of a turbine assembly is shown with a yellow mesh overlay. The model is composed of several parts: a blue central shaft, a purple inner casing, and yellow outer casing. The mesh is colored in shades of yellow and green, indicating stress distribution. The left sidebar shows a tree view with the following items: Applications, Sensors.1, Deformed Mesh, Extrema, Translational displacement magnitude, Von Mises Stress (nodal value), and Static Case Solution.1.

On the right, the 'Interference' window is open, showing the definition and results of the analysis. The definition is 'Interference.1' with a type of 'Contact + Clash' and a filter of 'Between two selections'. The results show 5 interferences: 5 Clash, 0 Contact, and 0 Clearance. The filter list is set to 'All types', 'No filter on value', and 'All statuses'. The table below lists the interferences:

No.	Product 1	Product 2	Type	Value	Status
1	Casing (Casing.2)	LP_3Blades (LP...	Clash		Not in
2	Inner_Casing (In...	LP_3Blades (LP...	Clash	-1.15	Relev
3	Stage3_Blade (...	LP_3Blades (LP...	Clash		Not in
4	Front_Bearing_S...	LP_3Blades (LP...	Clash		Not in
5	LP_Shaft_Front...	LP_3Blades (LP...	Clash		Not in



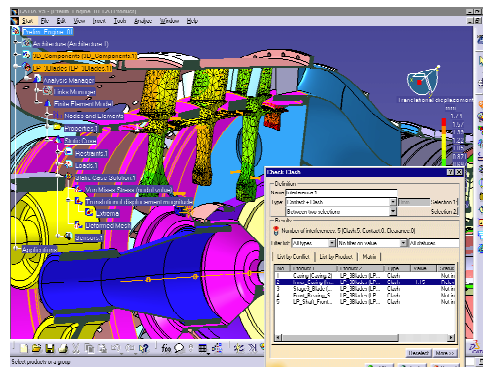
Product Synthesis

DMU - Engineering Analysis Review

Provide an easy-to-use capability to visualize and perform DMU reviews of Engineering Analysis Studies

Product overview

DMU Engineering Analysis Review 2 (ANR) provides the capability to easily access and review the analysis results generated through the CATIA Analysis suite of products or results created by third party CAA applications. Using a digital mock-up, this product takes the integration of Design and Analysis to a new level with the ability to check interferences and perform measurements between the deformed shape and surrounding solid parts. This ensures that this part will operate within its expected limits in loaded and unloaded conditions.



user may review complex analysis quickly and easily using lower cost, entry-level hardware greatly increasing the portability of critical information.

Product Highlights

- ❑ Access of analysis results for the non-specialists
- ❑ Animation of analysis results
- ❑ Automatic detailed report generation
- ❑ Advanced DMU review

Product Key Customers Benefits

Access of analysis results for the non-specialist

The DMU Engineering Analysis Review 2 (ANR) product provides the capability to review pre-processing specifications defined on the CATIA Part as well as computational results performed on the mesh model using a simple, easy to understand and use methodology. The

Powerful visualisation tools

The user can create a wide variety of standard image templates to view commonly requested data. Additionally, any image previously defined or customised using CATIA Generative Part Stress 2 (GPS) or Elfini Structural Analysis 2 (EST) can be reviewed and manipulated. A rich set of visualization capabilities is provided to generate images and reports describing the characteristics of the parts and/or assemblies under review such as; dynamic sectioning of large parts and/or assemblies to provide a clear picture of interior results; dynamic display of a specific value at the mouse cursor position on the part to denote or highlight critical events; as well as the display of global results, such as failure, displacement, and principal stresses. Additionally, tools are provided to manipulate the display of results in order

to provide a more attractive image for visualization or report generation. For contour plots or other displays where colors are used to show the variation in result values, a palette is displayed within the 3D viewer and can be edited to modify the number of colors or to impose values for a specific color. For displays of parts or assemblies under load, users can control the deformation scale factor and dynamically animate the variations in deformation from undeformed to fully deformed. Maximum and minimum values of results and the part position at which they occur can also be displayed. Additionally, to ensure a complete understanding of part and/or assembly behavior, multiple images may be displayed in the same window along with the ability to manipulate them independently providing easy comparisons of images and promote a more complete understanding of the results.

Automatic detailed report generation...

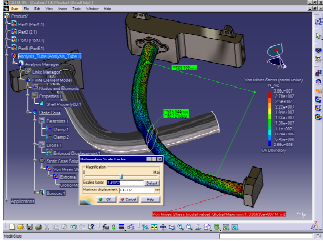
A comprehensive report on the complete analysis process can be automatically generated including information on meshing, material specifications, boundary conditions, and input loads along with a step by step view of the computation and final results. This report is generated either directly within the ANR product or through DMU Publishing tools providing data that can be used in project status reporting or for archival purposes ensuring maximum flexibility in the way information relating to the design and verification of critical parts and assemblies is generated and maintained.

Advanced DMU review...

Users can perform advanced reviews of the way parts or assemblies will interact with their environment under both normal and loaded operating conditions. This type of inquiry includes interference checking, sectioning, measurements, and band analysis of finite element models in both their static and deformed states. Sophisticated navigation in the context of

the complete digital mock-up provides a simulation of part or assembly behavior with an easy to use set of interactions. Potential problems can be identified quickly and easily by non-finite element specialists early in the design process. Managers can review the progress of a project greatly increasing the level of communication and understanding between design and analysis groups.

Other images



ABOUT CATIA V5R18

CATIA is Dassault Systemes' PLM solution for digital product definition and simulation.

plm.3ds.com/CATIA

