

PDQWORKS

PDQWorks is the first product available to SolidWorks designers to provide real-time CAD model quality verification (during design in SolidWorks) and certification to guarantee that product data quality guidelines for topology, geometry, and manufacturability are satisfied.

PDQ Criteria

- Model Tolerance
- Design Workspace

Geometry

Curves



Surfaces



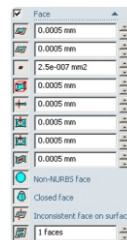
- AIAG
- JAMA
- VDA
- SASIG
- User defined

Topology

Edges



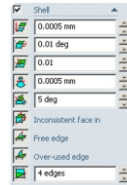
Faces



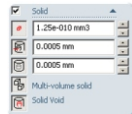
Loops



Shells



Solids



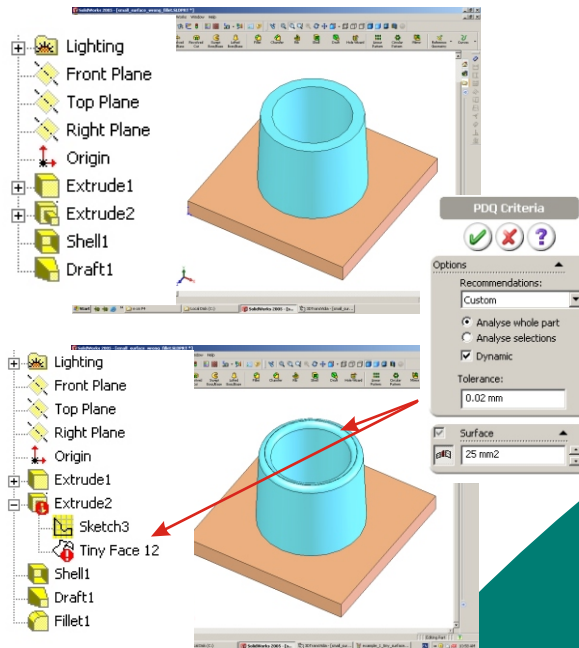
SolidWorks Models

PDQWorks verifies that models or separated entities created in SolidWorks will satisfy the quality requirements defined by the SASIG group (VDA 4955, AIAG D-15, GALIA, ODETTE, JAMA). You can also define your "own quality standards" to satisfy internal requirements and manufacturing capabilities of your organization.

Dynamic Verification

The model quality and conformity can be verified (dynamically or statically) at any stage of the design process in SolidWorks.

Dynamic Verification checks the model conformity during the design process in SolidWorks. The quality status is updated after each SolidWorks command. In case of error the user can rollback the operation causing a quality loss and apply different strategy.



With PDQWorks SolidWorks designers can get their models right the first time and avoid costly redesign problems. This is critical for SolidWorks users working with the automotive and aerospace industry, requiring high interoperability levels with CAD systems e.g. CATIA.

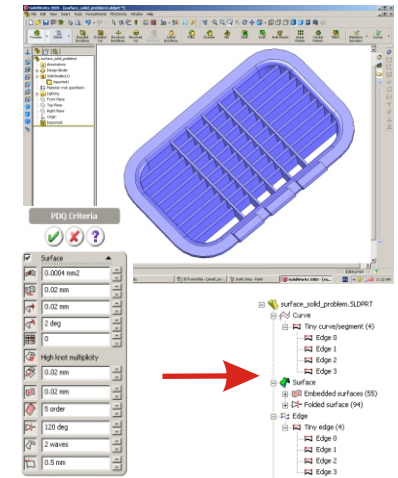
Static Verification

Static Verification can be applied on SolidWorks models and imported into SolidWorks models. The PDQ Quality check can be applied to the selected entities or the whole model.

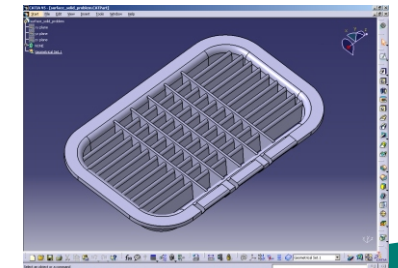
Exported Models

PDQWorks verifies that models exported from SolidWorks will satisfy the quality requirements of the receiving CAD/CAM systems (CATIA, Pro/E, UG, IDEAS, SolidWorks, etc). This makes the PDQWorks an integral part of the workflow that requires strict compliance with the given quality criteria.

For example, consider a SolidWorks -> CATIA V5 workflow. A part is modified in SolidWorks. Now the modifications can be verified by PDQWorks before exporting to CATIA V5. If the model is passing the test it means that it conforms to the quality criteria imposed by CATIA V5.



PDQWorks verification in SolidWorks



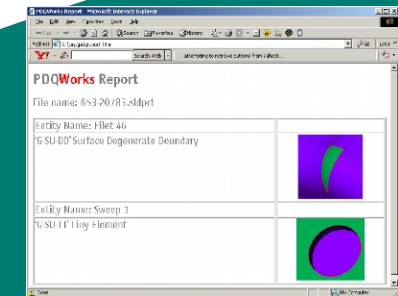
Verified model in CATIA V5

Reports

Detailed XML reports are automatically generated using SASIG group terminology for error classification and model entity definition.

SASIG terminology for surface errors :

- | | |
|-----------------------------|---------|
| Degenerate Surface Boundary | G-SU-DC |
| Degenerate Surface Corner | G-SU-DP |
| Indistinct Surface Knots | G-SU-IK |
| Self-Intersecting Surface | G-SU-IS |
| Embedded Surfaces | G-SU-EM |
| High-Degree Surface | G-SU-HD |



XML Report

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