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for
ANSYS 18

18

Advanced bolt assessment through process automation



Bolt Assessment inside ANSYS

CADFEM ANSYS extension for automated bolt assessment according to VDI 2230

Automated solution

Bolt Assessment inside ANSYS enables you to efficiently assess a huge number of bolts with high quality level, even for complex assemblies. This powerful ANSYS Extension provides standard values for the definition of bolted connections. The graphic results display allows for a fast identification of critical connections.

Advantages

- High level of automation
- Minimal user interaction
- Preset standard values, bolt library
- Precise results presentation
- Fast identification of critical connections
- Well defined, reproducible Workflow
- Assessment of static and dynamic strength according to VDI 2230 using KISSsoft (model classes III)

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VDI 2230 and KISSsoft

The module Bolt Assessment inside ANSYS provides a bolt assessment according to the VDI 2230 guideline. This is done by an automated nominal stress analysis for which all relevant parameters and internal forces are estimated from the FE-model and are transferred to the software KISSsoft. All results can be displayed graphically inside the familiar Workbench environment. Additionally, the results will be available as a KISSsoft report.

Workflow

Bolts are taken directly from the CAD-Model as volumetric bodies (model class III). The pretension for each bolt as well as all parameters that are relevant for its assessment can be defined in an input mask. Standard values from the KISSsoft library are provided to the user as default settings (when possible). Defined like this, the FE-model provides all necessary stiffnesses to assess the bolt connections precisely.

Supported model classes

Part 2 of VDI 2230 distinguishes 4 classes of bolt models, depending on the level of detail. As bolts are already existing in most CAD-models, Bolt Assessment inside ANSYS has been developed for model class III which corresponds to a simplified 3D volume representation of the bolt.

www.cadferm.de/produkte/ansys/cadferm-ansys-extensions

Technical Information

Fully integrated into ANSYS Workbench V16 and higher

www.cadferm.de/extensions

CADFEM®

CADFEM is recognized for CAE competence since 1985 – a single provider offering everything that decides on the success of simulations: i.e., Software and IT solutions, Consulting, Technical support, Engineering solutions, and Transfer of Know-how. As ANSYS Elite Channel partner and ANSYS Competence Center FEM, we serve & support the ANSYS users in Central Europe.

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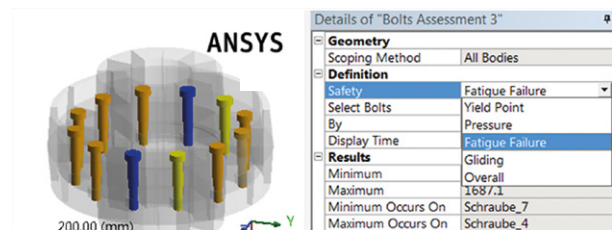
ANSYS is the world's largest provider of simulation software and offers Engineering software for almost every application in industry, research, and academia. ANSYS is among the **most popular CAE solutions in the market.**

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KISSSOFT

When used in keeping with currently valid standards, our software serves as a quick, high-quality tool for sizing machine elements, reviewing calculations, determining component strength, and documenting safety factors and product life parameters.

www.kisssoft.ch



Bolt Assessment inside ANSYS is a product of der CADFEM (Suisse) AG;

die KISSsoft Software is a product of KISSsoft AG;

ANSYS Workbench is a product of ANSYS, Inc.

State 03/2017: Changes and errors excepted

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