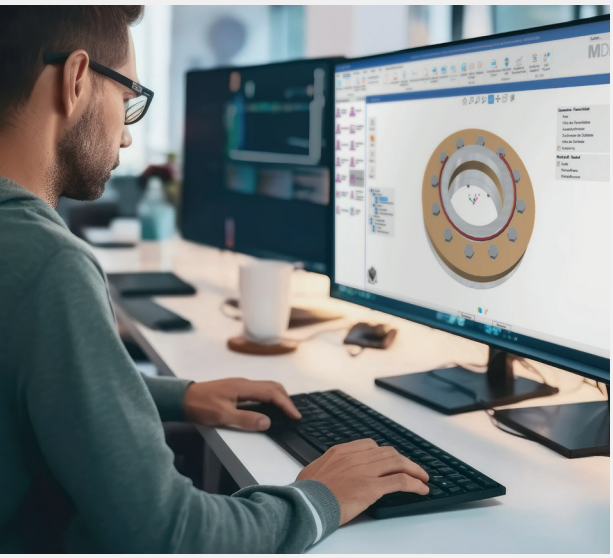
MDESIGN

MDESIGN Seminar

FORCE DETERMINATION IN SCREW FIELDS

These topics await you...

- → Multi-bolt connections according to VDI 2230 sheet 2
- → Safely evaluate loads on bolt fields
- → Tightening and assembly methods
- → Securing multi-bolt connections



SCREW FIELDS

Objectives of the seminar

Technical basics
Learn about the special requirements and calculation methods for multi-bolt connections in accordance with VDI 2230 Sheet 2

Cost efficiency
Material and cost savings through optimized design practices

Increased safety
Concrete assessment of forces increases verification reliability

Practical examples
Independent evaluation of tasks and applications

KNOWLEDGE UPDATE

Use your advantages

- ✓ **Personal certificate**
  Documentation of your newly acquired knowledge after attending the seminar
- ✓ **Good integration into everyday working life**
  Compact seminar content spread over 2 days
- ✓ **Flexible choice of dates**
  Several seminar dates per year
- ✓ **Online & Live**
  Seminars from anywhere and ask our experts questions interactively
- ✓ **Seminar documents**
  We also provide you with all the relevant information for „afterwards“ for reference

Target group

Engineers and specialists from the fields of development, design and calculation, teachers from educational institutions, experts from research institutions and testing companies.

SCREW FIELDS

Content & Details

Basics of the VDI 2230 Sheet 1

- Summary of calculation steps
- Problems with the calculation of multi-bolt connections

Continuation of VDI 2230 Sheet 2

Calculations: Introduction to multi-screw calculation

- Terms and basics of screw connections
- Requirements for screw connections
- Definitions of multi-bolt connections: Terms, types, delimitation

Safety: Loading of multi-bolt connections

- Load types for multi-bolt connections
- The behavior of a bolted joint in the elastic range
- The superpositions of the load distribution for longitudinal, shear force and moment loads
- determining the maximum loaded screw-in connection

Standards: Calculation method

Rigid body mechanics

- Basics
- Simplification, special features and limits
- Kreis-Flansche
- Circular flanges
- Non-rotationally symmetrical screw arrays

Elektromechanik

- Screw as a beam model
- Elastic bedding

Numerical methods FEM

Practice: Deepening the multi-screw topic

Model classes

- Task-related modeling variants
- Necessary calculation variables of the FEM for VDI 2230 Sheet 1
- Screw compliance

Comparison of FEM systems

- Necessary basic requirements
- Process effort for the determination of forces
- Required safety in the design process

Exemplary solutions with MDESIGN multibolt

More info on
mdesign.de