QForm introductory course (9 am CET)

Introduction	 General presentation Overview of the possibilities Goals of the brief training
Geometry preparation	 2D and 3D requirements QShape preparation, symmetry, direct import
Data setup demonstration	 Source data control panel, Workflow Initial data: Materials, temperature, equipment etc.
Analyzing results	 Fields, graphs, stress, strain Usual workpiece defects Saving of images, animations
Coupled deformation tasks	 Model types: General and Separate Postprocessing calculations
Database	Equipment, materials, lubricant
Postprocessing calculations	Tracing: points, lines, array linesSubroutines
Advanced features	 Simulation parameters: calculation step, mesh properties Export results
Conclusions	Questions and answersTasks for self-guided work

Goals

- Initial data setup and launching calculation
- Performing geometry preparation
- Analyzing the results, postprocessing calculations
- Performing tooling analysis
- Interaction with the Help manual

Plan of the course

- 1. Introduction (9:00-9:15)
- General presentation. Overview of the possibilities
- Documentation (QForm Manual)
- License
- Goals of the training

2. Preparation of case 3D_case (Lecture and Practice) (9:15-9:30)

- Demonstration of simulation setup. Describing initial data. (While case is on calculation tell about the interface, point 3)
- 3. Interface (Lecture) (9:30-10:00)
 - Main menu, Toolbar, Playback bar, Simulation control panel, Simulation message log
 - Source data control panel: Project, Operations, Geometry, Workpiece parameters, Tool parameters, Stop conditions, Boundary conditions, Blows (Necessary to emphasize the importance of setting the correct source data)

4. Analyzing results (Lecture and Practice) (10:00-10:30)

Fields, graphs, cross cut, animations, export results, measurements (case 3D_case, All tasks)

5. Preparation of case QExample 2D-3D (Lecture and Practice) (10:30-11:00)

- Demonstration of simulation setup. Describing initial data
- Sequence of operations
- From 2D to 3D
- Clipping surface

Coffeebreak (11:00-11:30)

6. Geometry preparation (Lecture and Practice) (11:30-11:50)

- 2D geometry requirements, Direct dxf-files import
- 3D geometry requirements. File extensions. QShape. Direct import

7. Preparation of 2D surf line (Lecture and Practice) (11:50-12:30, All tasks)

- Tracing undersurface lines. Tracing objects in general
- Minimum distance to surface field
- Garfield subroutine. Subroutines in general
- 8. Preparation of 2D Disk (Lecture and Practice) (12:30-13:10, All tasks)
 - Coupled deformation task. Model types: General and Separate.
 - Postprocessing calculations
 - Assembled tools, Fittings

Coffeebreak (13:10-13:25)

9. Database (Lecture) (13:25-13:40)

- Equipment, Deformed materials, Tool material, Lubricant, Environment
- Simulation parameters, advanced features: calculation step, mesh properties

10. Conclusions (13:40-14:00)

- Summary of obtained knowledge
- Giving tasks for self-guided work (4 cases)
- Questions and answers