FORGE®

Starting with FORGE® Hot Metal Forming Premium

The time has come for you to discover FORGE®'s Hot Metal Forming Premium module and its range of possibilities. Thanks to this module, run and analyze your warm or hot forming simulations!

This training is a first approach to using FORGE®'s Hot Metal Forming Premium module. On the first day, you will learn how to configure the data setup step-by-step, how to launch computations and how to analyze the main results. On the second day, you will learn how to examine a wide range of results more thoroughly to better interpret the physical phenomena at hand.

Key features such as die analysis, grain flow tracking tools or fold detection will be covered.

LEVEL

Beginner

PREREQUISITES

There is no prior requirement for this course.

GOALS

- **Knowing how to configure forging simulations (punching/ closed die forging)**
- **Analyzing simulation results**
- **Identifying and interpreting forging defects (folds, cracks, etc.)**
- **Viewing grain flow and monitoring physical values (temperature, pressure, etc.)**
- **Predicting die wear and performing die analysis (stress, etc.)**
- **Customizing your working environment**

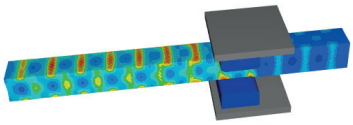
TRAINING	DURATION	PRICE EXCL. TAX	PARTICIPANTS
In-company	2 days	2600 € per training	1 to 3 people

Contact us to set the course date and location

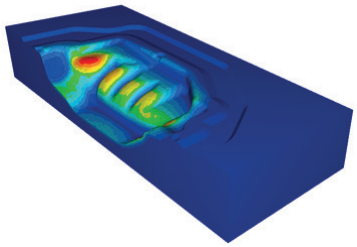
DAY 1 > 8.30 a.m. to 12.00 p.m. & 1.30 p.m. to 5.00 p.m.

Introduction	▫ Transvalor presentation ▫ Course goals ▫ Reminders of the finite element method
Data setup	▫ Working environment presentation ▫ Concepts: stores, processes, cases and stages ▫ Import of geometries ▫ Meshing and remeshing procedures ▫ Configuration of kinematics ▫ Rheology, friction, heat transfer, materials database (FPD) ▫ Concept of transition ▫ Application to a tutorial case
Launching computations	▫ Quick launch ▫ Computation manager and chained simulations
Analyzing results	▫ Display of results, main scalars and vectors ▫ Diagrams, animations, VTFx exports ▫ Multi-window analysis ▫ Handling animations and exporting results
Data setup for an industrial case	▫ Starting the computation

Temperature evolution



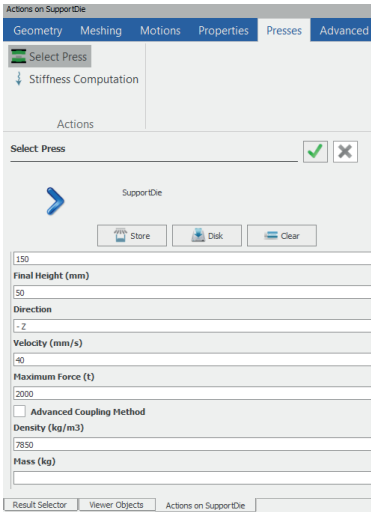
Equivalent strain evolution



Temperature evolution on the lower tool during die analysis with coupled approach

DAY 2 > 8.30 a.m. to 12.00 p.m. & 1.30 p.m. to 5.00 p.m.

Analyzing results from an industrial case	▫ Interpreting results
Additional functions	▫ Marking grid and grain flow ▫ Predefined and post-process sensors ▫ Furnace-to-press initial cooling ▫ Shearing, blanking and flash trimming of workpiece ▫ Import of tooling assembly
Die analysis	▫ Uncoupled and coupled approach
Working environment customization	▫ Creating specific models and data sets (materials, presses, friction, etc.) ▫ Custom Keyboard Shortcuts
Conclusions	▫ Questions and course assessment



Press configuration