FORGE®

NEW

New functionalities of FORGE® NxT 4.0

Do you want to further increase your productivity? Learn how to use the new features in FORGE® NxT 4.0 and make them work for you!

By the end of this course, you will be able to use all new features in FORGE® NxT 4.0 and work with the best practices to configure data and analyze results.
FORGE® NxT 4.0 provides a new user experience thanks to the optimization module newly implemented in its interface. You will also benefit from the reduction of computation times in 2D. The implementation of local remeshing in 3D improves the quality and accuracy of the solutions. It is now possible to model the steady state in cold rolling. This approach reduces the computation time. The new heat treatment functionalities will also be covered in this course.

LEVEL

Intermediate

PREREQUISITES

A first experience with FORGE® software is required.

GOALS

- **Mastering the new features in FORGE® NxT 4.0**
- **Taking advantage of the new features of the interface to configure data and analyze results faster**
- **Increasing the predictive quality of your simulations with more realistic data setups**
- **Gaining experience based on practical case studies**

OTHER RECOMMENDED COURSES

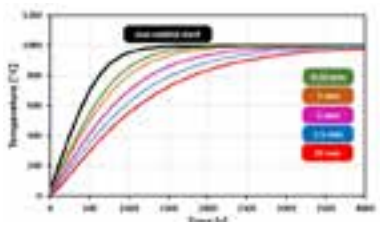
- FORGE® - Mastering the software
- FORGE® - Heat treatment of steel and aluminum

DURATION	DATES 2022	
1 Day	15 June	19 October

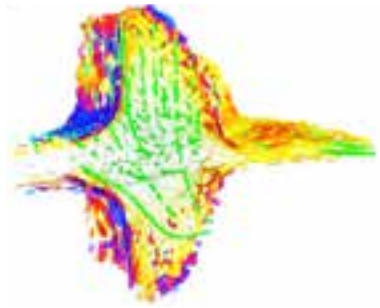
TRAINING	PRICE EXCL. TAX	PARTICIPANTS
Inter-company	540€ per person	3 to 8 people
In-company	1300€ per person	1 to 3 people

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
New features	• 2D CAD • Visualization of tensors and vectors • Custom legends • Generic macro
Material viewer	• Graphical User Interface • View and edit JMatPro files, point-to-point files, the FPD Base database, TTT files
Steady state in cold rolling	• Simulation setup of a process • Remeshing between passes • Field analysis: temperature, stress, velocity
Heat treatment	• Model of scale thickness as a function of heating time in the furnace (prediction and damage, influence on friction and wear) • Model of tempered martensite • Materials - Two aluminum alloys - Several TTT files for bimaterial systems • Extended quenchants database • Induction - Thermomechanics in inductors - Export of Lorentz forces - Second-order time integration scheme - Mesh R-adaptation for induction • Self-radiation
Automated optimization	• Concept - Terms of individuals and generation - Definition of a minimized variable - Definition of a constraint - Definition of parameters and operations • Study case
Shearing process	• Data setup • Advantages of Phase Field approach
Flow forming	• 2.5D approach
Conclusions	• Questions and course assessment



Influence of scale thickness on time required to homogenize the temperature at the center of the billet



Visualization of a tensor and a marking grid (cylinders in green)