



Starting with COLDFORM®

A simulation solution dedicated to cold forming processes. With COLDFORM®, be ready to simulate your cold forming processes and get the most out of the software!

This course will be your first approach to COLDFORM® software. The first day lets you understand all of the data setup steps, the procedure for launching computations and how to analyze the main results. The second day will be dedicated to a more in-depth analysis of notions such as forming defect detection, dimensional checks (spring-back)

and residual stresses.

To better interpret physical phenomena, key functions will also be covered such as Die stress analysis (with or without interference fit), grain flow fibers and point tracking techniques.

LEVEL

Beginner

PREREQUISITES

There is no prior requirement for this course.

GOALS

- Data setup for a cold forming case study using a multi-station process
- Launching a single computation and/or a computation sequence
- Analyzing simulation results
- Identifying and interpreting forming defects (folds, cracks, etc.)
- Measuring spring-back and quantifying residual stresses
- Viewing grain flow and monitoring physical quantities (temperature, pressure, etc.) at any point on the part
- Predicting stress states in tooling or in pre-stressed assemblies
- Customizing your working environment

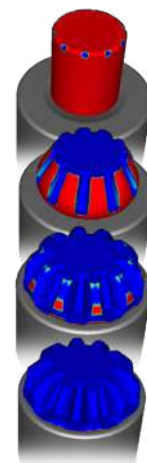
OTHER RECOMMENDED COURSES

- Finite element modeling fundamentals
- New functionalities of COLDFORM® NxT 4.1

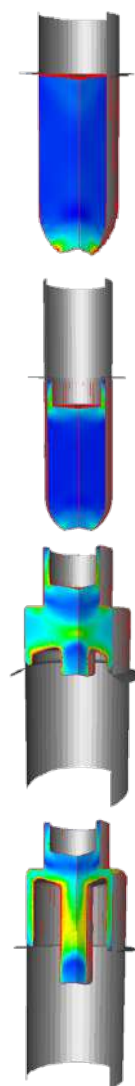
DURATION	DATES 2024		
2 days	09-10 April	25-26 July	10-11 December
TRAINING	PRICE EXCL. TAX	PARTICIPANTS	
Inter-company	1160 € per person	3 to 8 people	
In-company	2800 € per training	1 to 3 people	

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

Introduction	<ul style="list-style-type: none"> • Presentation of Transvalor • Course goals
Data setup	<ul style="list-style-type: none"> • Presentation of the environment: concepts of stores, processes, cases, stages • Importing geometries • Surface and volume meshes • Definition of the kinematics • Review of: rheology, friction and heat transfer • Materials database (FPD) / creating a cold forming file with YS, UTS and Elongation at break • Working on objects (creation, trimming, 2D/3D transfer) • Setting up a tutorial (a screw): cold forming in 2D and 3D modes
Launching computations	<ul style="list-style-type: none"> • Start, stop, information • Simulation chaining
Analyzing results	<ul style="list-style-type: none"> • Displaying results, the main scalars and vectors, spring-back • Curve lines, animations, VTFx export
Customer's process	<ul style="list-style-type: none"> • Setup • Starting a computation



Cold forming a bevel gear with contact



Cold forming a valve cage on an automatic transfer press

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

Analyzing results from a customer case	<ul style="list-style-type: none"> • Interpreting results
Functions	<ul style="list-style-type: none"> • Marking grid and grain flow • Pre defined and post processes sensors • Assembly import
Die analysis	<ul style="list-style-type: none"> • Uncoupled and coupled approach
Advanced notions	<ul style="list-style-type: none"> • Environment customization: models, materials, presses, friction, etc.
Conclusions	<ul style="list-style-type: none"> • Questions and course assessment