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

TRAINING	DURATION	PRICE EXCL. TAX	PARTICIPANTS
In-company	2 days	€2800 per training	1 to 3 people

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

Introduction	 Presentation of Transvalor Course goals 	
Data setup	 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	 Start, stop, information Simulation chaining 	
Analyzing results	 Displaying results, the main scalars and vectors, spring-back Curve lines, animations, VTFx export 	
Customer's process	Setup Starting a computation	

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	Interpreting results	
Functions	 Marking grid and grain flow Pre defined and post processes sensors Assembly import 	
Die analysis	Uncoupled and coupled approach	
Advanced notions	Environment customization: models, materials, presses, friction, etc.	
Conclusions	Questions and course assessment	



Cold forming a bevel gear with contact



Cold forming a valve cage on an automatic transfer press