TRANSWELD®

Starting with TRANSWELD®

Discover with TRANSWELD® what simulation can bring to the deep understanding and analysis of the physical and metallurgical characteristics of welds.

Many industries like the aeronautics and automotive industries use Laser Beam Welding to assemble components while guaranteeing their physical material continuity. This training is your first approach to TRANSWELD® software that simulates laser processes for all types of metals. You will learn how to use the various functionalities of the software, how to configure welding simulations and how to analyze their main results. The course will also cover topics such as Automated Adaptive Anisotropic Remeshing, the configuration of the laser beam and the customization of the working environment.

LEVEL

Beginner

PREREQUISITES

There is no prior requirement for this course.

GOALS

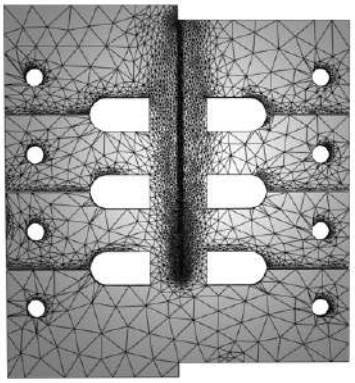
- **Mastering the graphical user interface**
- **Configuring welding simulations with TRANSWELD®**
- **Customizing your working environment for greater effectiveness**
- **Speeding up the data configuration**
- **Analyzing computation results better**

TRAINING	DURATION	PRICE EXCL. TAX	PARTICIPANTS
In-company	3 days	4200 € 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.

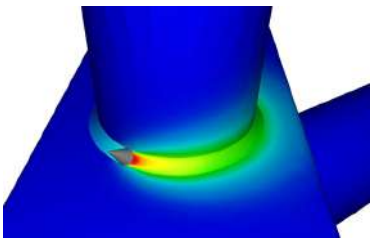
Introduction	· Presentation of Transvalor · Course goals
Graphic environment	· Presentation of the working environment · Concepts: stores, processes, cases and stages
Ergonomic User Interface	· Right click: customization of contextual menu · Automatic saving of project · Customization of keyboard shortcuts
Data Setup LBW / EBW	· Configuration of welded components: geometry, mesh, material... · Laser parameters (efficiency, power, etc.) · Design of weld path trajectories with work angles and travel angles · Definition of the distance to the parts and speed of the laser · Definition of the weld sequence · Global parameters of the simulation: heat transfer, process time, room temperature...
Computation	· Quick launch and computation restart procedure
Results analysis	· Displaying the results: temperature, liquid fraction, heat affected zone, Von Mises... · Diagrams, animations, VTFx exports · Concepts of sensors and marking grids



Laser beam welding of two sheets with automatic remeshing

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

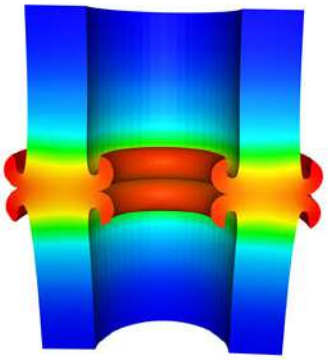
Advanced Configuration Options GMAW / GTAW MWB	· Multi-object selection: advanced option of geometry import · Editing of files (materials, heat transfer, heat source) directly from the interface · Design of weld path trajectories with work angles and travel angles · Definition of the distance to the parts and speed of torches · Design of weld run sequence with sequencer
Data setup PWB	· Generation of weld bead sections · Generation of weld beads · Understanding the use of filler material in PWB
Computation	· MWB and PWB computation quick launch



Temperature fields in Arc Welding process

DAY 3 > 8.30 a.m. to 12.00 p.m. & 1.30 p.m. to 5.00 p.m.

Advanced results analysis options	· Custom actions (display configuration, scalar display...) · Synchronized multi-window animation
Data setup RSW / CDW / DDFW / IFW / LFW	· Concept of chained computations or stand-alone computation · Configuration of objects, cathodes, anodes and welded components · Remeshing techniques · Configuration of simulation parameters · Definition of heat sources · Type of computation · Quick launch and results analysis
Software customization	· Creating specific process models and data sets (materials, heat transfer, friction, etc.)
Conclusions	· Questions and course assessment



Temperature fields displayed on a cutting plane at the end of a Direct Drive Friction Welding process