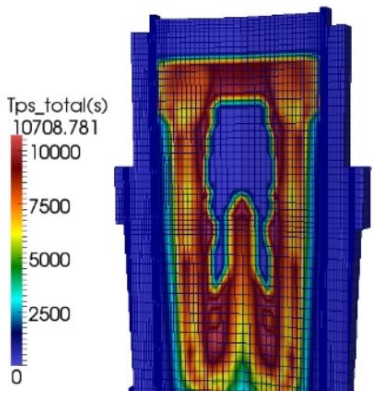
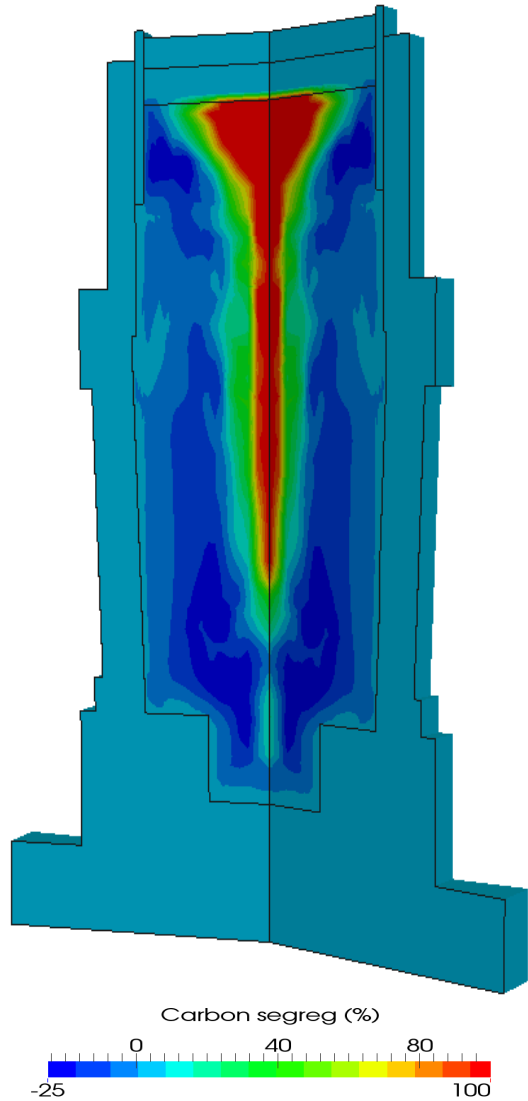




# Ingot & Continuous Casting Process Simulation



**Solid** is an advanced simulation software designed to evaluate metallurgical evolution during casting of ingots or in continuous casting. It supports the ingot elaboration and process optimisation in steel industry.

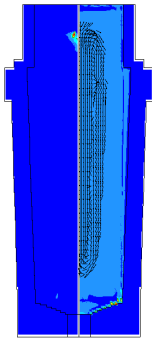


« **General purpose for a better return on investment** » Alloys are freely defined during simulation preparation. Solid is therefore suitable for a large set of ingots types. Included, a configuration of thermal exchanges and molding materials.

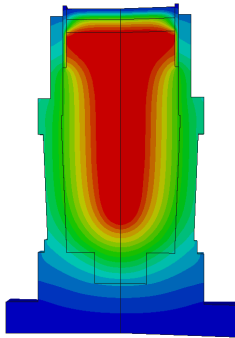
« **Fully integrated for a fast learning curve** » Geometry and meshing are defined with a single graphical interface. Process conditions are defined using a simple keywords set.

« **Advanced models for a predictive simulation** » Physical models activations are scalable to run from the simplest and more rapid simulation to the more sophisticated thermo-metallurgical configurations.

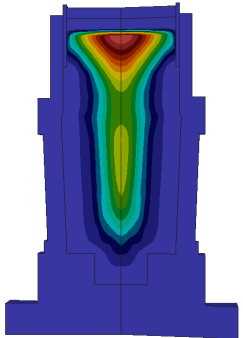
« **Large set of results for an indeep analysis** » From well known local solidification time to more specific micro & macro segregations, engineers access to the subtle metallurgical states.



Velocity field



Temperature



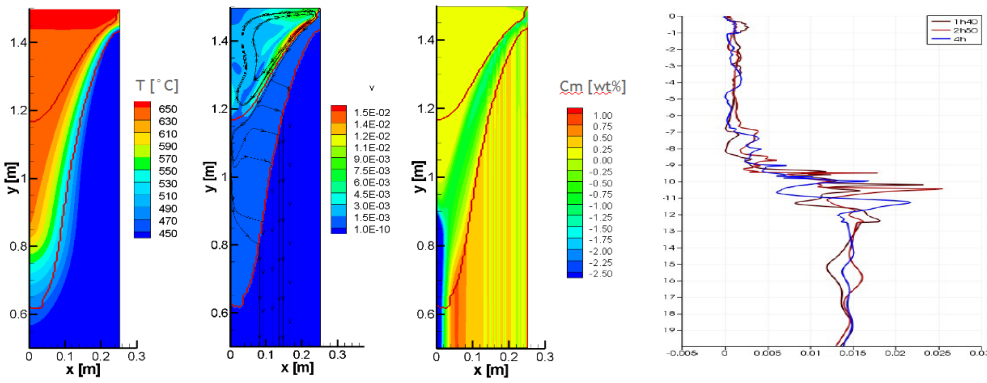
Local solidification time

**Control the Process to Control the Product**

Sciences Computers Consultants  
Saint Etienne France



Sciences Computers Consultants Inc.  
Montréal (Québec)

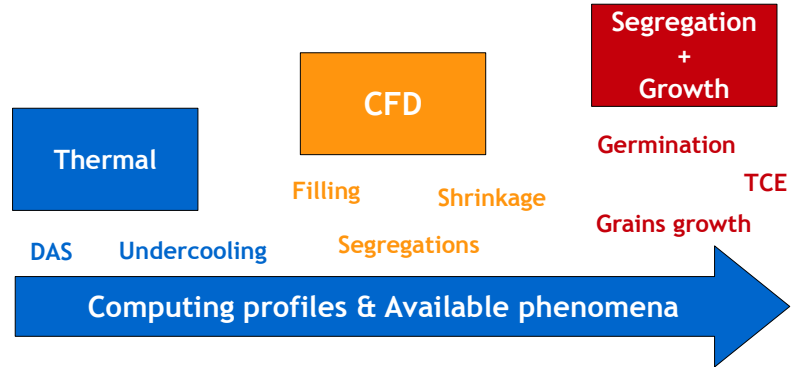


## Continuous casting

Results are computed over time. The effects of sprays are considered by thermal exchanges at boundaries conditions. Large set of results about segregations, liquid well depth, etc...

## Selection of needed precision

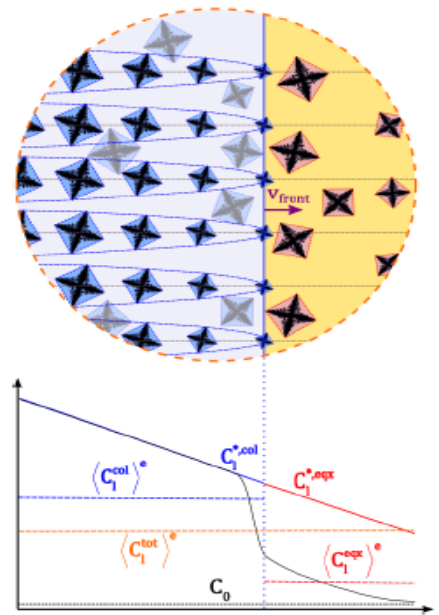
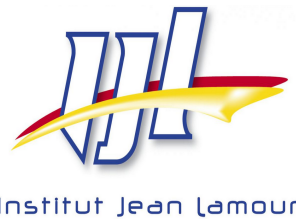
Physics complexity is supported by several computing profiles, giving access to specific solidifications phenomena. Therefore, most of these phenomena can be deactivated if desired.



## **olid** : The future of solidification's simulation

The Solid software is involved in several R&D projects in order to continue his development. These projects with industrial and research partners allow Solid to beneficiate of last innovations concerning physic models in solidification, including :

- Germination
- Fragmentation
- Grains growth
- Grains motion
- Columnar-Equiaxed Transition



## Control the Process to Control the Product

Based on a 30-year experience, SCC is your partner in manufacturing processes optimization with applied engineering simulation solutions.

Continuous innovation brought by our R&D collaborations and activity provide our customers the most suitable and efficient process simulation solutions.



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