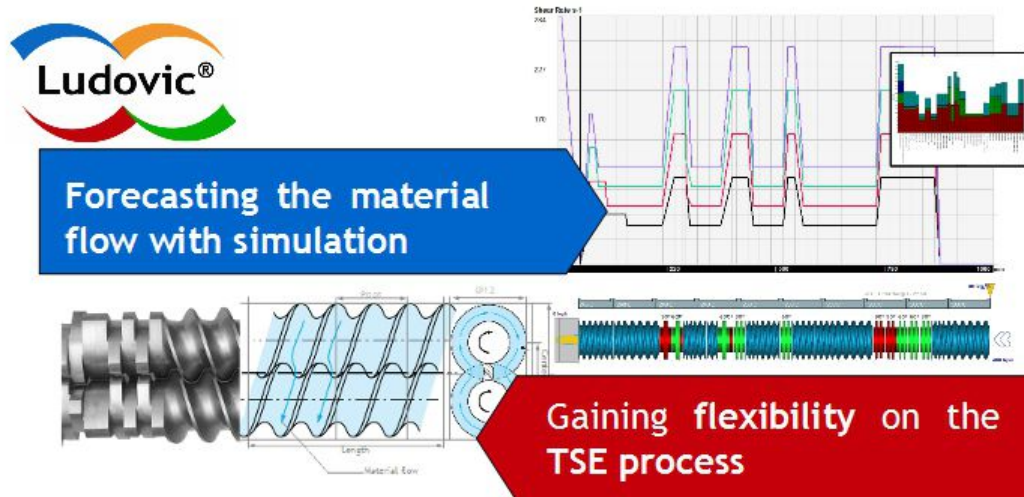


Ludovic® Training – v6.2



Training targets

The goal of this training is to provide to the attendees all the knowledge and tools for being self efficient in the use of the Ludovic® software (dedicated to corotating twin screw extruders).

This training is designed for the Ludovic last release.

Audience

This training is dedicated to the process engineers, extrusion technicians, researchers and teachers who are dealing with experiments and trials on a corotating twin screw extruders.

Training program

This training is set on 2 days.

- **Day one : Initial training**
 - Basis use of the Ludovic® software and principles functioning
- **Day two : Advanced training and practicals**
 - Performing experiments plans and optimizing simulations

Day one - Initial Training

- **Introduction : the corotating twin screw extrusion process**
 - Principles of the Ludovic® software
 - The physics equations
 - The Ludovic® rules and assumptions

-
- Advantages/limits of this method
 - **Creating a simulation with Ludovic®**
 - The geometry components
 - Design of the screw elements
 - Assembly of the screw profile
 - Die design
 - Product definition
 - Mechanical behaviour
 - Thermal characteristics
 - Dealing with recipes
 - Additives and fillers : rules and definition
 - Defining adapted operating conditions
 - Screw speed vs. throughput
 - Playing with the barrel thermal regulation
 - **The Ludovic® results**
 - F(x) results : for a distribution of thermo-mechanical results along the profile
 - Global Results : state of the machine energy consumption
 - RTD : analysis of the mixing efficiency within the Residence Time Distribution
 - **Handling the Ludovic® software for practicals**
 - Database management
 - Creating Screw elements library
 - Using the material library
 - **PRACTICAL** : building a complete simulation
 - **PRACTICAL** : identification of the process key parameters and general rules

Day Two - Advanced training and practicals

The second training day is fully dedicated to the set up and analysis of **practical experiments**.

- **Performing real experiments plans**
 - Screening a complete functioning domain with the DOE
 - Parameters and results
 - Defining and adapted functioning domain toward constraints and material limits
- **PRACTICAL** : Sensitivity analysis of the process
- **PRACTICAL** : Scale up (on demand)
- The Computation options
 - Reactive Extrusion

-
- Glass Fibers
 - Slidding and Expansion
 - ...
 - Customer dedicated application case
 - Upon customers requirements, a specific application case can be performed during this part of the trainin. Input data (geometry, material and operating conditions details) are necessary. They have to be submitted to SC-Consultants 15 days prior to the training effective date.

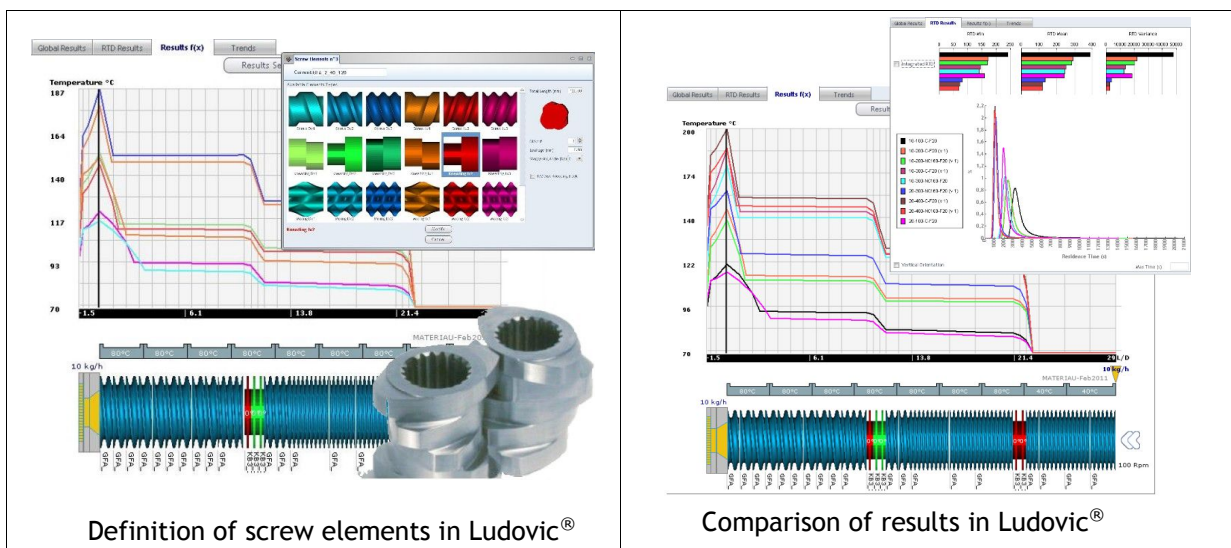
Training organization

Specific conditions

This program has been established for a training on the SCC site. Stations, licenses and work documents are provided by SCC to the attendees.

Training consultant

The Ludovic® training is provided by Pauline ALVARES, extrusion applications engineer of SCC. She is in charge of the Ludovic® development, customers support and consulting actions. She is also involved on the National or European Research Project dealing with extrusion topics (glass and natural fibers, nano-composites, mixing index...).



Sciences Computers Consultants

10 rue du plateau des glières F-42000 Saint Etienne

Tél. 33(0)4-77 49 75 80

E Mail: scc@sccconsultants.com Internet: www.sccconsultants.com

SAS au capital de 49200 Euros RC Saint-Etienne B 390 220 119

Place and access

The Ludovic® training takes place on the SCC site :

Sciences Computers Consultants
10 rue du plateau des glières
F-42000 Saint Etienne

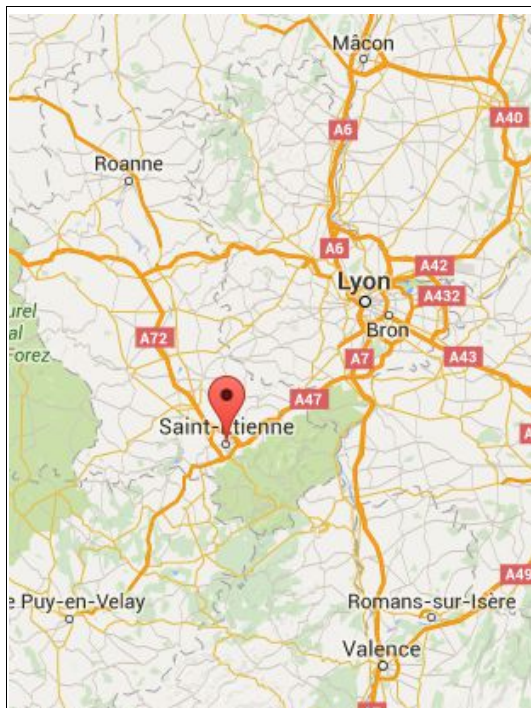
Hotels around the SCC location

Different hotels are closed to the SCC headquarters :

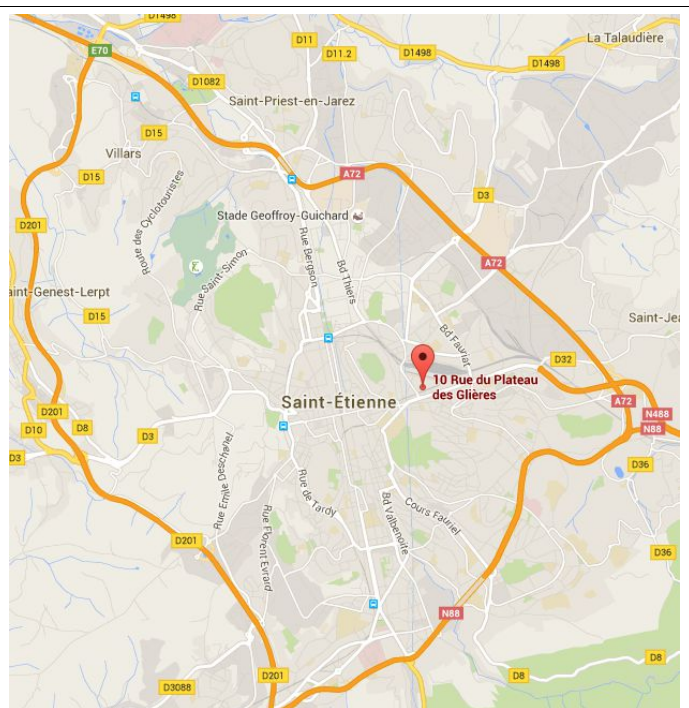
Hôtel IBIS Chateauxreux	35 avenue Denfer Rochereau F-42000 Saint Etienne	04 77 37 90 90	2 stars, WIFI, parking
Hôtel TERMINUS du FOREZ	31 avenue Denfer Rochereau F-42000 Saint Etienne	04 77 32 48 47	3 stars, WIFI
Hôtel d'Anjou	33 avenue Denfer Rochereau F-42000 Saint Etienne	04 77 32 34 36	2 stars, WIFI
Hôtel KYRIAD	77 rue de la Montat F-42000 Saint Etienne	04 77 21 12 21	WIFI, parking

Access

The SCC headquarters are located in front of the Chateauxreux trainstation.



Saint Etienne in the Rhone Alpes area



SCC offices in the Saint Etienne city map

Sciences Computers Consultants

10 rue du plateau des glières F-42000 Saint Etienne

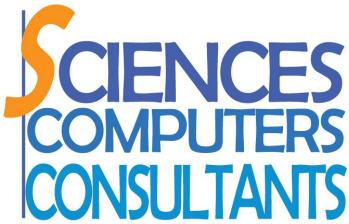
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Information and contact

For more information, contact SCC :

 The logo features a large, stylized orange letter 'S' on the left. To its right, the words 'SCIENCES', 'COMPUTERS', and 'CONSULTANTS' are stacked vertically in a bold, blue, sans-serif font.	<p>SCIENCES COMPUTERS CONSULTANTS 10 rue du plateau des Glières F-42000 Saint Etienne Tel : +33 4 77 49 75 80 scc@scconsultants.com http://www.scconsultants.com</p>
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