

# Metallurgy and Mechanics in Rhône-Alpes

## 1. KEY FIGURES

<i>Number of jobs:</i>	<i>352,000</i>
- <i>Mechanical engineering:</i>	<i>102,000</i>
- <i>Metallurgy:</i>	<i>250,000</i>
<i>Number of companies:</i>	<i>10,800</i>
- <i>Mechanical engineering:</i>	<i>1,800</i>
- <i>Metallurgy:</i>	<i>9,000</i>
<i>Sales: 63.3 billion euros</i>	
- <i>Mechanical engineering:</i>	<i>13.3 billion euros</i>
- <i>Metallurgy:</i>	<i>50 billion euros</i>

*Metallurgy activities and mechanical engineering hold a special place in the Rhône-Alpes region because of their size (almost 11,000 companies, 350,000 jobs), and their specialised productions (for example: refrigeration industry) and the role they play vis-à-vis companies from other sectors (for example: subcontracting, sheet-metal work, piping...).*

*This presentation highlights the most prominent specializations while sub-contracting activities are dealt with in another section*

## 2. DEFINITION

"Mechanical engineering-metallurgy" covers the following activities:

- Iron and steel works, cold drawing
- Melting
- Metal processing
- Manufacturing metallic elements for construction (joinery work, metal closure, etc.)
- Manufacturing various metallic products (cutlery, screws, stoppers, etc.)
- Sheet-metal work and piping
- Bar turning operations
- Aerological and refrigeration
- Outfitting
- General or special purpose machines, for the paper industry, agri-food, textile industries
- Lifting and maintenance equipment
- And various sub-contracting activities calling on diverse techniques for a number of sectors, including in particular the car industry, medical equipment, etc.

### 3. REGIONAL SPECIAL FEATURES

Melting is set apart in that there is a significant light metals melting activity (corrosion-resistant metals and alloys) with companies such as Fonderies du Léman, Métaltemple in Savoie, or Florence and Peillon in the Rhône. Rhône-Alpes is the leading French region for the production of aluminium with Péchiney, which is based in Maurienne.

Engineering is strongly represented in the Rhône-Alpes region with companies such as, Comabi in Ain, specialised in scaffolding, or Francialex, specialised in joinery and screw work.

The industrial services for metal work and in particular metal processing and coating constitute a regional speciality. Examples include Opinel's knife manufacturing activity (created in Savoie in 1890) or equipment or cutting implements with companies such as Tivoly in Savoie or Demurger in Roanne, specialised in metal sawing.

Another pole representing the engineering industries of the Rhône-Alpes region is sheet-metal work. This industry is divided in two types of activities: nuclear sheet-metal work, which employs more than 1,830 employees, and sheet-metal work/piping, which counts 5, 356 employees. Mainly concentrated in the Rhône and Isère, these two types of activities are represented respectively by two of the world's leading firms: Framatome-ANP, world leader in nuclear sheet-metal work, and Boccard, world leader in industrial piping-sheet-metal work.

Although somewhat less typical of the Rhône-Alpes region, the lifting equipment industry also cites world leaders such as Pomagalski in Isère, the global number one in lift facilities. Still in the domain of people transport, the Rhône-Alpes region is home to the four world leaders in the elevator industry, namely Otis, Schindler, Kone and Thyssen.

The special purpose machine sector is an area of excellence. With the presence of companies of international dimension such as Caterpillar in Grenoble, Montabert in Saint-Priest, Solymac Fiorani in Vaulx-en-Verin, Pinguely Haulotte in the Loire, specialised in cherry pickers, or even Potain, world's leading company in crane manufacturing, the region holds the national leadership in manufacturing excavation and construction machines. Apart from this, the region represents this sector in:

- machines for the agri-food industry with companies such as Pavallier in the Drôme (specialised in cooking appliances) or Bonnet in the Rhône (for food refrigeration);
- printing presses, with Imaje in Bourg-les-Valence, the leader in industrial labelling;
- machines for transforming rubber and plastics, with for example the Billion firm;
- paperboard equipment companies such as Martin.

The machine-tool industry, active at national level, is less well represented in the Rhône-Alpes region, although there are sizeable companies such as SCEMM (Société de construction des équipements mécaniques et machines), a PSA subsidiary in Saint-Étienne.

In the sector of general-purpose machines, the refrigeration industry stands as a regional flagship with its 6,000 employees and the presence of leading companies such as Tecumseh, Ciat and Carrier (see the section on the refrigeration industry).

#### 4. TRAINING

This includes professional and in-house training to attract new talent.

Significant training efforts have been made with the establishment of structures to deal with professional training such as:

- the Associations pour la formation professionnelle de l'industrie network (AFPI - Vocational training schools for industry),
- the Centres de formation d'apprentis de l'industrie network (CFAI - Training centres of apprentices of industry).

In conjunction with these centres, the Rhône-Alpes region also trains technicians and engineers for professions in the metallurgy sphere in institutes such as the Institut de développement de la compétitivité par la qualité (IDECQ - Development of competitiveness through quality institute) or the Institut des techniques d'ingénieurs de l'industrie (IT2I - Industrial engineering techniques institute).

To support this potential, the Rhône-Alpes region has access to teaching centres and technical centres of a very high quality. There are the grandes écoles for engineering such as the École des Mines in Saint-Étienne, the École centrale in Lyon, INSA in Lyon (Institut national des sciences appliquées, mécanique et productique - National institute of applied sciences).

As is the case with this higher education network, the regional technical centres are structured so as to favour access to new technologies and improve the development of new processes. The CETIM in Saint-Étienne, the Centre technique de l'industrie du décolletage (Industrial bar turning technical centre) in Cluses (Haute-Savoie), the CETIAT in Villeurbanne (Centre technique des industries aérauliques et thermiques - Technical centre for industries in aerualics and heat transfer) or indeed the Institut de la soudure - Welding Institute in Saint-Priest and Bourg-en-Bresse are particularly active as far as regional companies are concerned.

Finally, the Pôle productique in Saint-Étienne is making a sustained effort with mechanical engineering companies to improve productivity.

#### 5. EVENTS

- The European trade show of industrial bodywork and road haulage. This trade fair, which takes place in Lyon, alternating with that of Hanovre, has a two-fold objective: to pool the many professions linked to industrial bodywork, but also to promote a little known profession even at the level of company directors themselves.
- Expotherm is the trade fair for the air-conditioning and air treatment industries. Plan Visio Méca: co-ordinated by the Association pour une industrie mécanicienne d'excellence en Rhône-Alpes (APIMERA), was created

to translate the shared commitment of professionals from the mechanical sector, regional technical centres, the Regional Council and the DRIRE (Direction régionale de l'industrie, de la recherche et de l'environnement - Regional board for industry, research and the environment). For a period of three years, it aims to detect and enhance outstanding mechanical companies in the service of dominant and emerging markets in the Rhône-Alpes region.

## 6. RHÔNE-ALPES, REFRIGERATION CAPITAL

The aerualics and thermal industry is made up of manufacturers and fitters of heating, ventilation, air conditioning equipment, as well as all of the components required for heating or cooling. This industry in the Rhône-Alpes region pools around 350 companies and generates sales of over 214 million euros.

Since 1833, date when François Bonnet set up the first industrial refrigeration company, the aerualics and thermal industry has become a veritable regional speciality and today boasts the leading figures in the sector. Among them, the U.S. company Carrier, the world leader in air conditioning, has turned its Montluel (Ain) site into a "design centre" for the world, but also France Air in Beynost (Ain), Tecumseh (former Hermetic Unit) in Verpillière (Isère) or the Compagnie industrielle des applications thermiques (CIAT) in Culoz (Ain). In Rillieux-la-Pape (Rhône), the AFPA, continuing education centre in the field of refrigeration, is today nationally renowned for its high quality of certified training.

Since 1960, the Centre technique des industries aérauliques et thermiques (CETIAT - Technical centre for industries in aerualics and heat transfer) has offered professionals in aerualics and thermal engineering all types of studies in fields as varied as acoustics, thermal industry or aerualics.

## **THE METALLURGY AND MECHANICS SECTORS ACCORDING TO...**

### **JEAN-YVES NOURISSON**

**President of Union des industries métallurgiques et électriques de la région Rhône-Alpes (UDIMERA)**

#### **How would you define metallurgy in the Rhône-Alpes region?**

If you take the presence of large groups like Usinor or Framatome, regional metallurgy is above all an industry composed of small and medium-sized companies oriented for the most part towards the subcontracting industry.

#### **What are the main assets?**

Both responsiveness and adaptability to meet new market needs and large production output. These assets are a necessity in order to yield influence at the global level. However, today the profession is suffering from a significant shortage of qualified staff and it must attract new vocations.

#### **What are the challenges of metallurgy in the Rhône-Alpes region?**

We have to continue research into new production techniques, as is currently the case for new processing methods. The other challenge consists in promoting the industry's degree of excellence by focusing on leader companies. This presupposes skill sharing. This is the reason why we are working in association with the other sectors of activity as the mechanical equipment industry. Our challenges are very close to those of professionals in the mechanical engineering industry. Together, we should soon be able to offer services and solutions which are both comprehensive and adapted to the prime contractors.

#### **How can such varied activities be combined?**

By means of the Plan Visio Méca, the APIMERA (Association pour une industrie mécanicienne d'excellence en Rhône-Alpes) will allow a blueprint for regional development to be drawn up between all of the branches of activity. This project presents for each all of the players in the regional mechanical engineering sector: the UDIMERA (Union des industries métallurgiques et électriques de Rhône-Alpes - Metallurgy and electrical industries union), the chambers of commerce and industry, the Federation of mechanical engineering industries or the Rhône-Alpes association of technical centres. Thanks to this joint action, a whole range of professional activities will be revived which will contribute to the high degree of excellence demonstrated in the Rhône-Alpes mechanical engineering industry.