
Launch of Air Liquide Severstal

The largest gas production unit in Russia (3,000 tonnes of oxygen each day)



www.airliquide.com

September 5, 2007

Air Liquide Severstal in brief

Created in 2005, **ALS is a joint venture** in which Air Liquide holds 75% and Severstal 25%. It will install and utilize its own air separation unit whose priority will be to satisfy the growing oxygen demand of the Severstal steel producing site at Cherepovets (Russia).

■ Key dates:

- ✓ June 2005: **signature** of the « letter of intent » between Air Liquide and Severstal
- ✓ December 2005: building and work permits approved
- ✓ July 2005/June 2006: design of the **Air Separation Unit**
- ✓ September 2006: **site works begins**
- ✓ December 2006: **construction begins**
- ✓ July 2007: **commissioning and first production of gas**
- ✓ September 2007: **launch of the new Air Separation Unit**



Air Liquide in Russia

Air Liquide Russia has been based in Moscow since 1989 and was primarily concerned with the sale of industrial gas production equipment in Russia and the Ukraine. In 2007 it established the production unit at the **Knauf Insulation site**, signed an agreement with the semiconductor manufacturer **Mikron** and announced a €20 million investment in the independent region of **Khanty-Mansvisk**.

The ambition of Air Liquide Russia is to establish itself throughout Russian territory.



Air Liquide in Russia

- **1911: sale of the first Air Separation Unit (ASU) in Russia**
- **1946: sale of 18 ASUs** to the Minister of the Defense of RSSU
- **1989:** opening of a representative office for equipment sales in Russia and the Ukraine (Engineering and equipment)
- **1991:** creation of a **subsidiary for production and sale of rare gases**
- **1995:** first Air Liquide investments in a nitrogen unit for a paint and glazing factory in Zagorsk
- **1996-1998:** sales of a nitrogen generator (membrane) and hydrogen generator for the chemical and petrochemical industries
- **1998:** modernization of a Russian ASU in the Ukraine
- **2000-2004:** sales of cryogenic units and membranes in Russia for **Sibur, Akron, Lukoil, OAO NIPgazpererabotka and Salavatnefteorgsintez**. Sales of 5 ASUs in the Ukraine, with **Ilitch, Azovstal, Zaporozhstal** 2,000 tonnes oxygen per day, production capacity and at **Altchevsk** (4,000 tonnes per day).
- **2005: creation of OOO Air Liquide**, the Russian subsidiary for production and sale of industrial gases
- **2005:** long term **contract for** production and sale of industrial gases for the metallurgical plant of **Cherepovets Severstal**. This ASU has a capacity of 3,000 tonnes of oxygen per day.
- **2006:** long term **contract for** production and sale of industrial gases with **Knauf Insolation (glass industry)**
- **2007:** signature of two agreements with **Mikron**, the largest producer of semi-conductors in Russia

Klaus Schmieder's biography

Klaus Schmieder, Senior Executive Vice-President



General management includes **Benoît Potier, Chairman and CEO** and **two Senior Executive Vice-Presidents, Jean-Claude Buono and Klaus Schmieder.** (see biographies of Benoît Potier and Jean-Claude Buono on pages 20 and 21).

■ Klaus SCHMIEDER Senior Executive Vice-President

Born in 1948 – German nationality

- ✓ Diplomas in law and economics



- ✓ Joined the Hoechst Group in 1977
- ✓ 1996 deputy member of the Executive Board of Hoechst AG; full member of the Board, responsible for the Finance Division
- ✓ Chairman of the Management Board of Messer Griesheim GmbH since January 2000. Area of responsibility: Legal, Auditing, Human Resources, Corporate Communications / Marketing Services. Regional Management USA
- ✓ **Joined Air Liquide in May 2004**, as Executive Vice President, Member of the Management Board, Member of the Executive Committee
- ✓ Inside the European Operations Office, he supervises and coordinates gas and services operations in Europe excluding Large Industries and Healthcare activities
- ✓ Vice-Chairman Air Liquide GmbH
- ✓ Director, Air Liquide Deutschland GmbH, Air Liquide Italia, Air Liquide España
- ✓ Member of Supervisory Board, Altana AG

The Air Liquide group

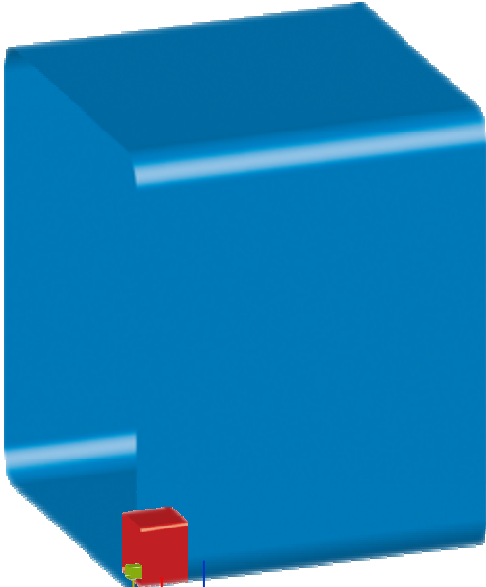
The air, an inexhaustible resource ...

A resource...

Rich in possibilities

Plentiful

Eternal



78% nitrogen

21% oxygen

1% rare gases
(including xenon, krypton, neon, argon)

The Air Liquide Group at a glance

- **World leader** in industrial and medical gases and related services
- Present in **72 countries**
- Over **38,000** employees
- **7 Research & Development centers**, more than 200 patents annually
- Innovative solutions for **one million customers** in a broad range of industrial sectors and healthcare: gases are indispensable in everyday life
- **365,000 individual shareholders who hold 38.4% of the capital**. A relationship with shareholders built on **trust and transparency** for more than 100 years.
- A commitment to **sustainable development**: responsibility to the shareholder, safety and preservation of the environment, social and ethical commitment, innovation and technological progress
- Sales in 2006: **€10,949 million**
- Net earnings 2005: **€1,002 million**
- Adjusted earnings per share: **€8.35**

Air Liquide's core expertise: industrial and medical gases

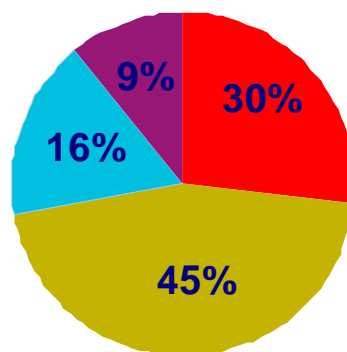
■ Air Liquide is a product of innovation:

In 1902, two young engineers, **Georges Claude** and **Paul Delorme**, perfected a process to liquefy air and produce oxygen. Results were considerably superior to techniques in use at the time. For more than 100 years, Air Liquide has built on this core knowledge, broadening its expertise to all gases.



■ Today the Air Liquide group is organized in 4 World Business Lines:

- **Industrial Merchant:** gases in small and medium quantities for diversified sectors
- **Large Industries:** users of large volumes of industrial gases (chemistry, refining, metals)
- **Electronics:** carrier gases, specialty gases, liquid chemicals, manufacture and installation of fluid distribution equipment, and associated services for the semiconductor industry
- **Healthcare:** supply of medical gases, services and equipment to hospitals, homecare and hygiene

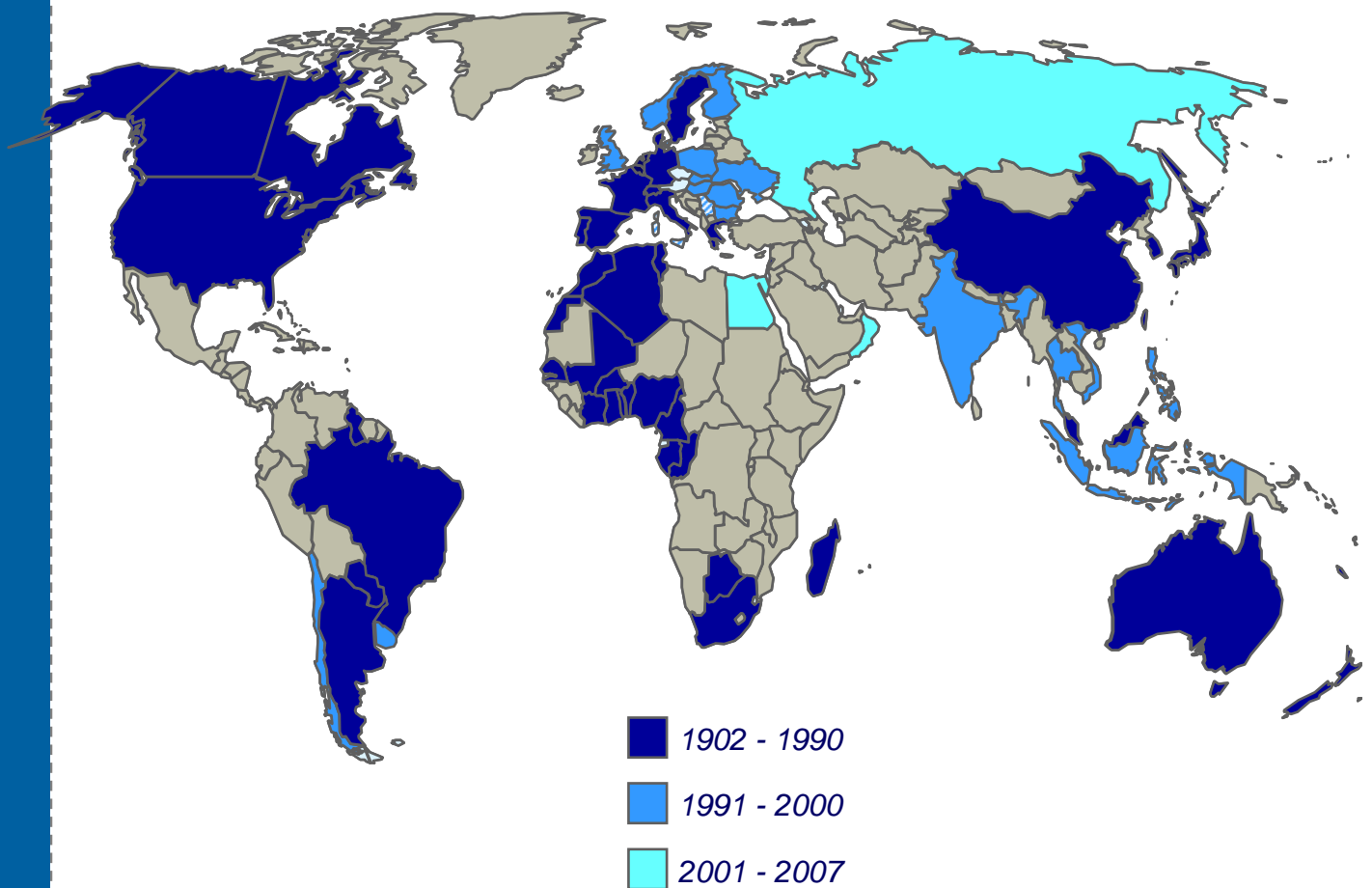


Split of Gas and Services revenue

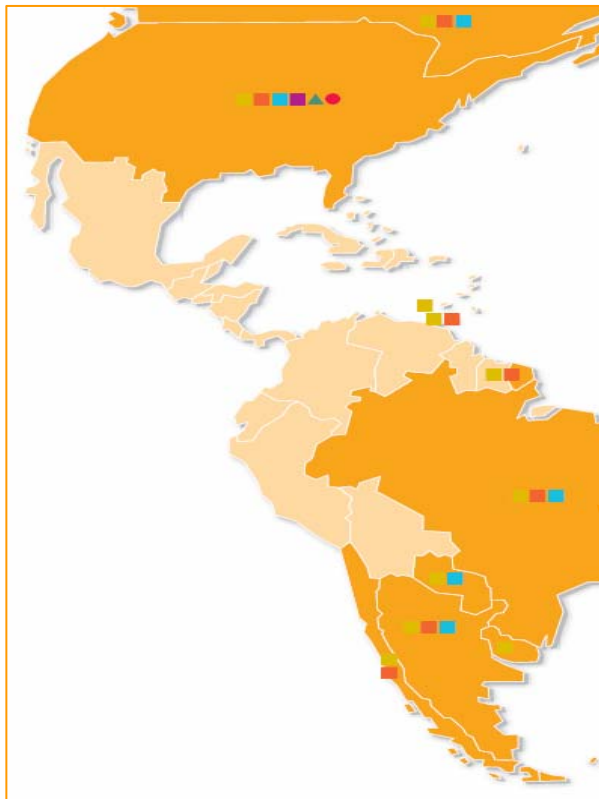
- In addition to these four major activities, **Related Activities:** engineering, welding, diving and chemistry

Air Liquide, an international Group

Present in **72 countries** around the world



Air Liquide, an international Group

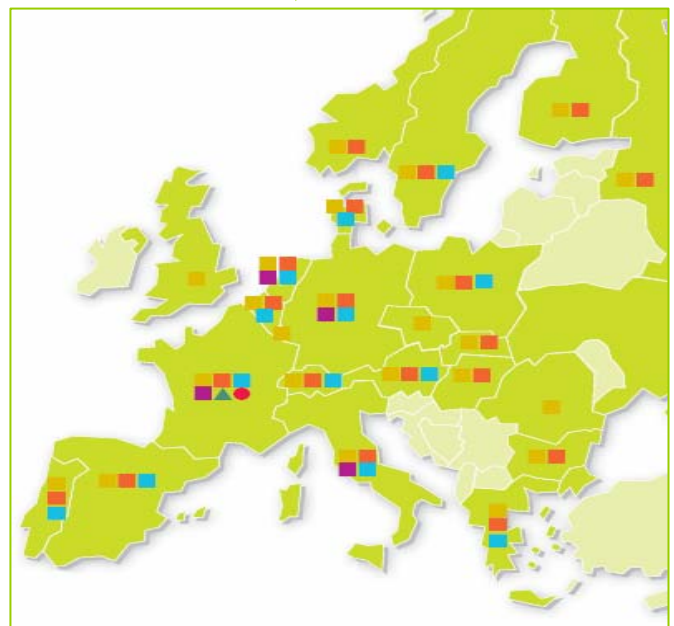


- ### Americas
- 1911: Canada
 - 1916: United States
 - 1938: Argentina
 - 1939: Paraguay
 - 1946: Brazil
 - 1980: French Guiana
 - 1980: Guadeloupe
 - 1980: Martinique
 - 1991: Uruguay
 - 1991: Chile
 - 2002: Trinidad and Tobago



- ### Europe
- 1902: France
 - 1906: Belgium
 - 1909: Italy
 - 1909: Greece
 - 1909: Spain
 - 1911: Sweden
 - 1913: Netherlands
 - 1923: Portugal
 - 1931: Luxembourg
 - 1957: Switzerland
 - 1971: Germany
 - 1972: Denmark
 - 1992: United-Kingdom
 - 1992: Ukraine
 - 1993: Finland
 - 1995: Poland
 - 1997: Norway
 - 1997: Hungary
 - 1999: Bulgaria
 - 1999: Romania
 - 2000: Slovakia
 - 2001: Austria
 - 2001: Czech Republic
 - 2005: Russia
 - 2007: Serbia

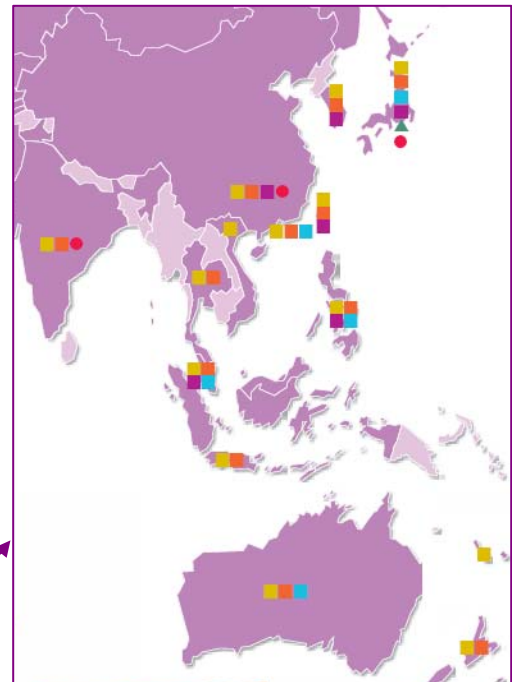
- Industrial Merchant
- Large Industries
- Electronics
- Healthcare
- Engineering
- ▲ Research Center



Air Liquide, an international Group

Asia-Pacific

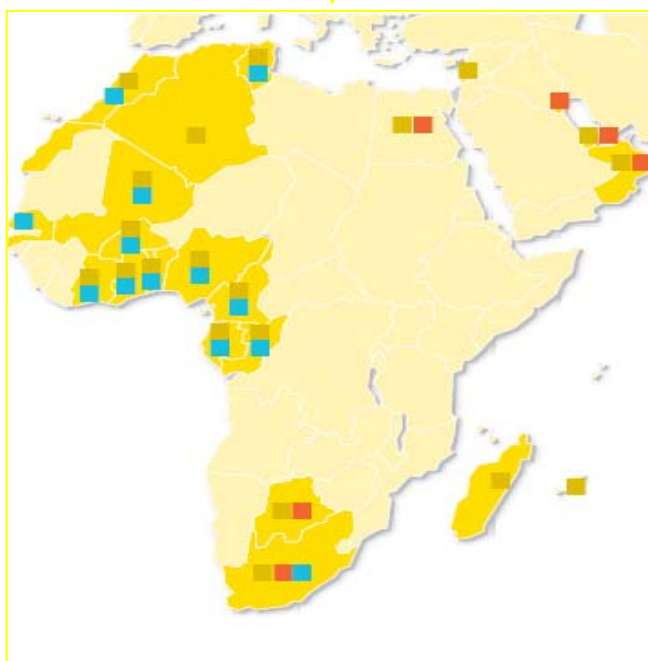
- 1907: Japan
- 1916: China
- 1917: Singapore
- 1957: Australia
- 1964: Polynesia
- 1973: New Caledonia
- 1979: South Korea
- 1983: New Zealand
- 1987: Taiwan
- 1991: Thailand
- 1993: Indonesia
- 1994: Philippines
- 1996: Vietnam
- 1996: India
- 1927: Malaysia



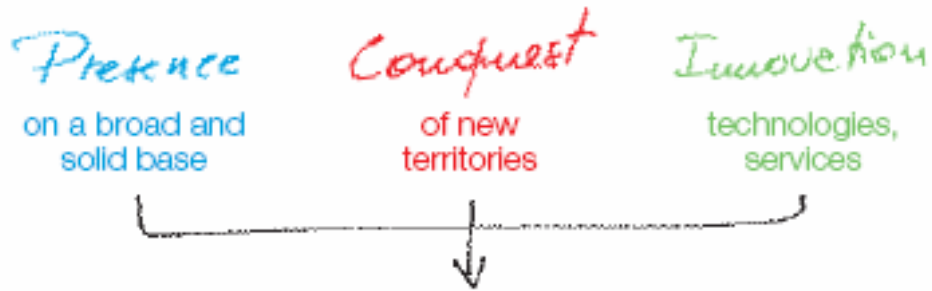
- Industrial Merchant
- Large Industries
- Electronics
- Healthcare
- Engineering
- ▲ Research Center

Africa and Middle East

- 1917: Algeria
- 1917: Tunisia
- 1928: Lebanon
- 1948: South Africa
- 1949: Madagascar
- 1956: Morocco
- 1960: Nigeria
- 1961: Ivory Coast
- 1963: Gabon
- 1964: Senegal
- 1966: Cameroon
- 1966: Congo
- 1970: Togo
- 1971: Ghana
- 1972: Burkina Faso
- 1973: Benin
- 1977: Botswana
- 2002: Egypt
- 2004: Qatar
- 2005: Oman
- 2006: Kuwait
- 2007: Algeria



The dynamics of growth articulated around Presence, Conquest and Innovation



Air Liquide committment to Sustainable Development



Air Liquide, committed to Sustainable Development

For Air Liquide, sustainable development focuses on 4 dimensions:

- **Creating value for shareholders** by developing the company's business performance over the long term and with transparency
- **Developing the potential of the company's men and women** in their commitment to common objectives:
 - ✓ Promoting diversity
 - ✓ Facilitating and speeding up knowledge transfer
 - ✓ Motivating and involving
 - ✓ Making commitments socially and humanely
- **Preserving life and the environment:**
 - ✓ Safety for people and sites
 - ✓ **« Safety is, and will remain, our highest priority » Benoît Potier**
 - ✓ Preserving the environment in the Group's operations and at customer sites
- **Innovating for tomorrow** to guarantee the growth of the company and its customers



This commitment concerning Sustainable Development was taken in 2002 by Benoît Potier, then Managing Director.

Promoting diversity and speeding up knowledge transfer

Air Liquide defines **diversity on every level**, convinced that it is source of **dynamism** and **creativity**. The balance of responsibilities between men and women is an integral part of this variety and the Group has in recent years strengthened the place of women in its organization. These efforts are shown in the regular increase in the percentage of women in the executive population:

- ✓ At the world level, women represent 18 % of engineers and managers and 29% of the hiring in this category (2006).
- ✓ Among the 250 managers who comprise the Executive committees of subsidiaries in the world, 12% are women (2006).

Objectives and key indicators in Human Resources:

■ Parity

To strengthen the position of women in the Group, in particular through recruitment of engineers and managers. The Group's objective is to increase the hiring of women in this category, from nearly **one out of three new hires today to more than two out of five within five years**.

■ Training

To increase training opportunities so that by 2009, all employees have the chance to enhance their skills and facilitate their advancement through, on average, **at least three training days a year**.

- ✓ 2005: 2.6 days training per person per year
- ✓ 2006: 2.7 days training per person per year



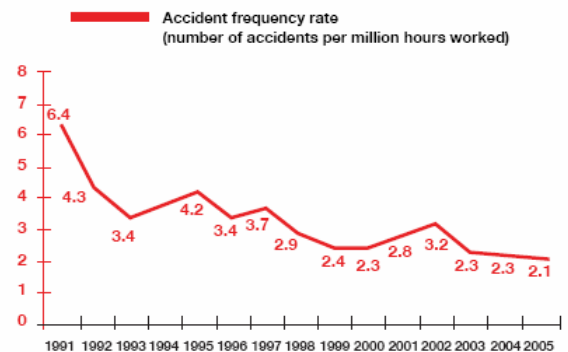
Preserving life and environment

Safety and environment are the heart of the Group's industrial policy

■ Safety for people and sites

Safety is a real priority not only for the Air Liquide teams but also at its subcontractors and customer sites. This strong emphasis on safety has helped the Group to cut its accident frequency rate by two thirds in 15 years.

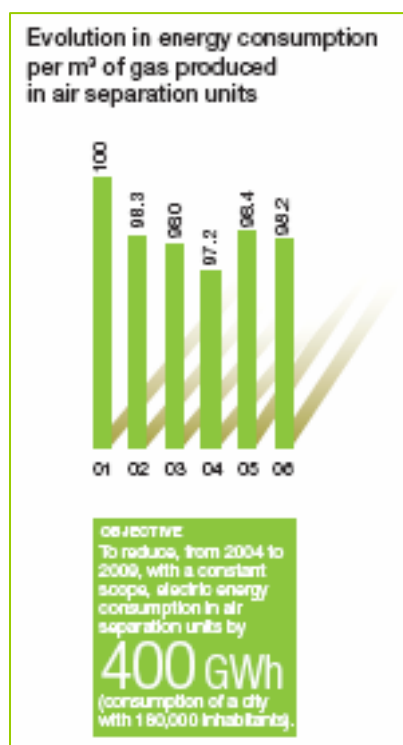
Frequency rate of lost-time accidents in the Group



■ Preserving the environment

Air Liquide plays an active part in preserving the environment, both in the Group's operations and at customer sites.

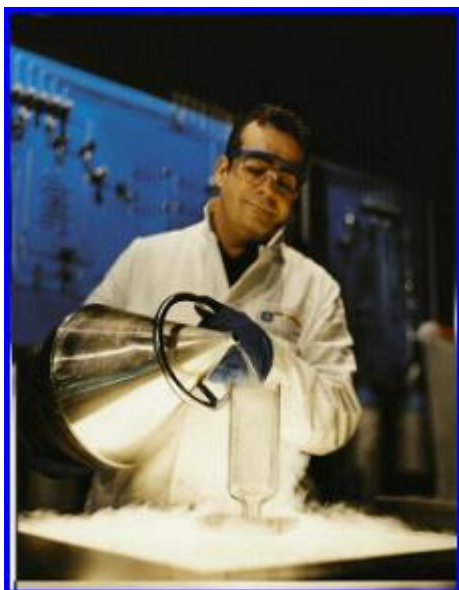
■ 3 key figures:



- ✓ **33%** of the revenue of the Group is directly linked to activities which contribute to protect the environment and life.
- ✓ More than 50% R&D budget is dedicated to works connected to Sustainable Development and in particular to the hydrogen, a vector of clean energy.
- ✓ **Improvement of the energy performance of nitrogen and oxygen production units.** In air separation units, the energy consumption by gas produced unit was reduced by 2 % over the last five years. This is the equivalent of the **annual consumption of electricity of a city of 200,000 inhabitants such as Bordeaux.**

Innovation in Air Liquide

- More than €200 million dedicated to research, innovation and technologies (2006)
- R&D: more than 850 researchers from 25 nationalities
- 7 main R&D centers (Europe, United States, Japan)
- Over 100 industrial partnerships and more than 100 international collaborations with universities and research institutes
- A dedicated division for Advanced Technologies with 750 partners in Europe and United States
- 200 to 250 patented innovations each year (a patent each day)
- A portfolio of 8,000 patents



- The three major axes of Research and Development complement the expectations of contemporary society:
 - « for a healthier life »
 - « in a communicating world »
 - « for a sustainable development »



- In 2007: Air Liquide opens a new **Research and Technology Center in the United States, at Newark (Delaware)**

Annexes

- General Management
 - The activities of the Group
 - Key Dates
-

General Management

■ **Benoît POTIER** Chairman and CEO

Born in 1957 – French nationality

- ✓ Ecole Centrale des Arts et Manufactures (Paris)
- ✓ Knight of the Legion of Honor
- ✓ Management programs:
 - INSEAD (European Institute of Business Administration)
 - Wharton International Forum



- During his 25 years with Air Liquide, Benoît Potier has handled many aspects of Air Liquide's business. Since his appointment as Corporate Chief Executive in 1997, he has assumed global responsibility for operations and development.

- ✓ Chairman and Chief Executive Officer, Air Liquide International, American Air Liquide Inc. and Air Liquide International Corporation
- ✓ Director, Air Liquide Italia, Air Liquide España
- ✓ Director, Air Liquide Asia Pte.Ltd., Air Liquide Canada
- ✓ Director, Air Liquide America Holdings Inc
- ✓ Director, Danone Group
- ✓ Member, Supervisory Board, Michelin
- ✓ Director, École Centrale des Arts et Manufactures

- General Management includes **Benoît Potier** (Chairman and CEO), **Jean-Claude Buono** (see on page 22) and **Klaus Schmieider** (see on page 5), Senior Executive Vice-Presidents.

General Management

- **Jean-Claude BUONO**
Senior Executive Vice-President
Born in 1943 – French nationality
 - ✓ ESCP



- Jean-Claude Buono joined Air Liquide in 1989 and has contributed his strong experience in financial and legal areas. In addition, he currently has major responsibilities in Europe and Asia.
 - ✓ Chairman and Chief Executive Officer, Air Liquide Welding and Air Liquide Asia Pte. Ltd.
 - ✓ Vice-Chairman, Carba Holding
 - ✓ Director and Executive Vice President, Air Liquide International
 - ✓ Director, American Air Liquide Inc.
 - ✓ Vice-President and Director Air Liquide International Corporation
 - ✓ Director, Air Liquide Santé International, Aqualung International, Air Liquide Far Eastern Ltd., Air Liquide Tunisie, Air Liquide Italia Srl., Air Liquide España
 - ✓ Director, Velecta Paramount
 - ✓ Director, SNPE (Société Nationale des Poudres et Explosifs)

Air Liquide activities: Industrial Merchant

Mission: constantly innovating with our customers, and providing them, worldwide, with reliable and high-quality solutions that meet their key Challenges both today and tomorrow, through our technological know how and our networks of experts and researchers.

■ Automobile & Manufacturing

The applications of gas are present throughout the manufacture of a vehicle, from its conception to its assembly on production lines.

- ✓ Production of steel, manufacturing the plastic components
- ✓ Heat treatment of iron
- ✓ Pneumatics, lighting, windscreens and windows



■ Food & Pharmaceuticals

Fruit, vegetables, meat, fish, gases intervene throughout the chain from the producer to the consumer.

- ✓ Preserve the packed products
- ✓ Cool and freeze food
- ✓ Preserve liquids, make effervescent carbonated drinks
- ✓ Control the growth and maturity of fruit and vegetables



We also consume gases to look after ourselves, Air Liquide ensures the integrity of the cold chain for the safety of medicines.



■ Materials & Energy

- ✓ Glass-making: oxygen, nitrogen and hydrogen
- ✓ Double glazing: argon
- ✓ Optimization of performance in printing clingfilm
- ✓ Water treatment: oxygen, ozone and carbon dioxide

■ Technology & Research

- ✓ Gas for the manufacturing of optical fibers, photovoltaic cells and luminescent diodes
- ✓ Assemblies of electronic components
- ✓ High technologies: research, space, telecommunications...

■ Craftsmen & Distributors

They are plumbers, garage owners, mechanics... the craftsmen use cylinder gases for welding or cutting metals very often.

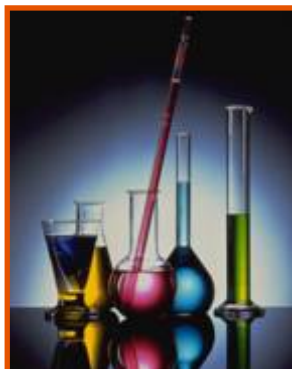
16,000 employees/revenue in 2006: €4.364 billion

Air Liquide activities: Large Industries

Mission: offering gas and energy solutions to large industries around the world to improve their process efficiency and help them become environmentally responsible.

■ Refining & Natural gas

- ✓ Hydrogen is a gas in strong growth used in refineries **to remove sulfur from fuels**. It is also used to “crack” heavy hydrocarbons.
- ✓ Oxygen allows the stimulation of certain units or the gasification of oil residues. It is also necessary for the **transformation of natural gas** or coal in **fuels** or in **methanol**.



■ Chemicals

The chemical industry consumes huge quantities of air gases, hydrogen and carbon monoxide, the latter serving for making polyurethanes (foam) and polycarbonates (CD, DVD) used in everyday life.

■ Metals

- ✓ The use of oxygen improves the **productivity** and **energy performance** of steelworks while reducing emissions in the atmosphere.
- ✓ Nitrogen enables the transport of pulverized coal for feeding blast furnaces.
- ✓ Argon is used in the manufacture of stainless steel.



Revenue in 2006: €2.922 billion

Air Liquide activities: Electronics

Mission : supplying the flat screen and semiconductor industry, a user of leading-edge technologies, with ultra-pure gases and fluids.

■ Ultra-pure fluids

Carrier gases (nitrogen, oxygen, hydrogen, argon, helium...), **Specialty gases** (silane..), **liquid chemicals**: fluids used in *fabs* (manufacturing plants of semiconductors) are ultra pure. New molecules are always being developed



■ Fluid management

The teams located at customer sites take complete management of fluids on site.



■ Equipment

Teams of Air Liquide Electronics **design, manufacture and install** fluid distribution equipment



3,000 employees/revenue in 2006: €64 million

Air Liquide activities: Healthcare

Mission: supporting patients in hospitals and in their homes through the provision of a range of services and equipment.

■ Homecare

Treatment at home is generally better accepted by the patient suffering a chronic pathology and improves his/her quality of everyday life.

- ✓ Artificial respiration (Oxygen therapy, sleep apnea...)
- ✓ Nutritional assistance
- ✓ Treatment by drip (pain, insulin therapy...)
- ✓ Equipment at home (medical care bed, wheelchair...)



■ Medical gases

Medical gases (nitrous oxide, oxygen...) are medicines. They relieve pain, anaesthetize, assist breathing and preserve cells.



■ Medical Hygiene

A wide range of products and services for disinfection and sterilization to fight against hospital-borne infections.



■ Equipment

In hospitals, in intensive care units, in operating rooms, in recovery rooms, medical equipment ensures patients' breathing.

6,350 employees/revenue in 2006: €1.478 billion

Air Liquide, more than 100 years of innovation and development



- **1902:** Georges Claude and Paul Delorme perfect a process to liquify air by separating its components. First drops of liquid air and creation of the company bearing the same name. Paul Delorme is the company's first chairman.
- **1906:** International expansion begins in Belgium and Japan, followed by Canada.
- **1913:** Air Liquide is listed on Paris Stock Exchange.
- **1945:** After the war, Jean Delorme, Air Liquide's second chairman, works hard to restore, modernize, and expand industrial capacity.
- **1957:** Launch of the Large Industries activity and construction of pipeline networks to serve several large industrial centers around the world.
- **1962:** Beginning of the space adventure.
- **1986:** Air Liquide pursues expansion in the U.S., acquiring the Big Three Company, and in many other countries, in Europe and Asia in particular.
- **1995:** Creation of Air Liquide Santé: a structure and teams to supply medical gases, materials and services, dedicated exclusively to the medical sector, first hospitals, then homecare.
- **2001:** Acquisition of Messer Griesheim operations in South Africa, Trinidad & Tobago, Canada, Egypt, Argentina and Brazil.
- **2003:** Creation of a joint venture with BOC in Japan – Japan Air Gases (JAG), which strengthens Air Liquide's presence in the Far East.
- **2004:** Acquisition of Messer Griesheim's assets in Germany, the UK and the US.
- **2005:** Successful integration of Messer's activities, development of Large Industries, through hydrogen notably, increase of the implantation in new territories, performance of Healthcare Business Line, technology and innovation development.
- **2006:** Air Liquide established in Koweit and reinforces its presence in Japan with the acquisition of 100% of Japan Air Gases (JAG).
- **2007:** Air Liquide announces the acquisition of **Linde Gas UK in the United Kingdom** and finalizes the purchase of four joint ventures in South-East Asia: **Soxal** (Singapore), **Eastern Industrial Gases** (Thailand), **Vietnam Industrial Gases** (Vietnam) and **Brunox** (Brunei). Finally, Air Liquide widens its technological and engineering capacities, with the acquisition of **Lurgi in Germany**.



L'Air Liquide S.A.
the study and application of
processes developed by George CLAUDE
with issued capital of 1,328,815,653 euros

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