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EIGA

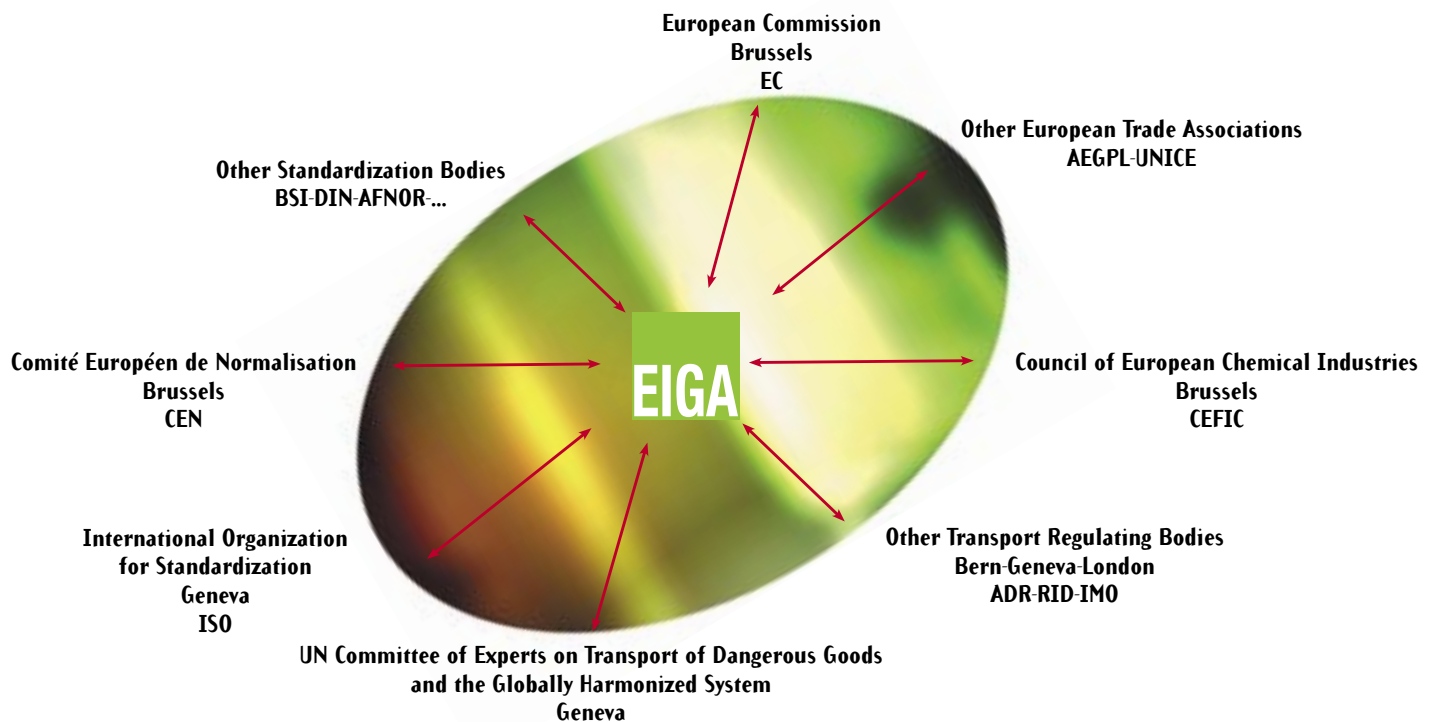
EUROPEAN INDUSTRIAL GASES ASSOCIATION



This is EIGA

The European Industrial Gases Association, EIGA, is a safety and technically oriented organization representing the vast majority of European and a number of non-European companies producing and distributing industrial, medicinal and food gases.

The member companies closely co-operate in safety and technical matters to achieve the highest level of safety and environmental care in the handling of gases.



Mission statement

EIGA shall

- » maintain the highest standards of safety and concern for the environment at work and in the community
- » provide Authorities and Standardization Bodies with expert advice on production, transport, storage and applications of industrial, medical and food gases
- » promote consistency of safety, health, environmental and technical standards throughout the industrial gas industry.

Established 1923

The association began in Paris back in 1923 with the creation of the *Commission Permanente Internationale, CPI*. In 1989, CPI merged with *EDIA, the European Dry Ice Association*, the association of carbon dioxide (CO₂) producers. The merged association moved to Brussels in 1990 and changed its name to the *European Industrial Gases Association, EIGA*, in April 1991.



Support to Authorities and Standardization Bodies

EIGA provides Authorities with professional advice in the preparation of laws and regulations concerning gases and pressure equipment. EIGA also initiates the development of appropriate standards and provides Standardization Bodies with technical expertise.

Co-operation with other associations

EIGA fully co-operates with its sister associations such as the **CGA**, Compressed Gas Association (USA), **JIGA**, Japanese Industrial Gases Association and also **AIGA**, Asian Industrial Gases Association and **ANZIGA**, Australia New Zealand Industrial Gases Association.

Advice and guidance to the industrial gases industry

EIGA reviews reported accidents with the objectives of providing advice to members on how to prevent reoccurrence.

EIGA provides advice and guidance on technical matters, particularly those which are safety-related.

EIGA gives guidance on relevant environmental issues to ensure respect for the environment and to prevent pollution.

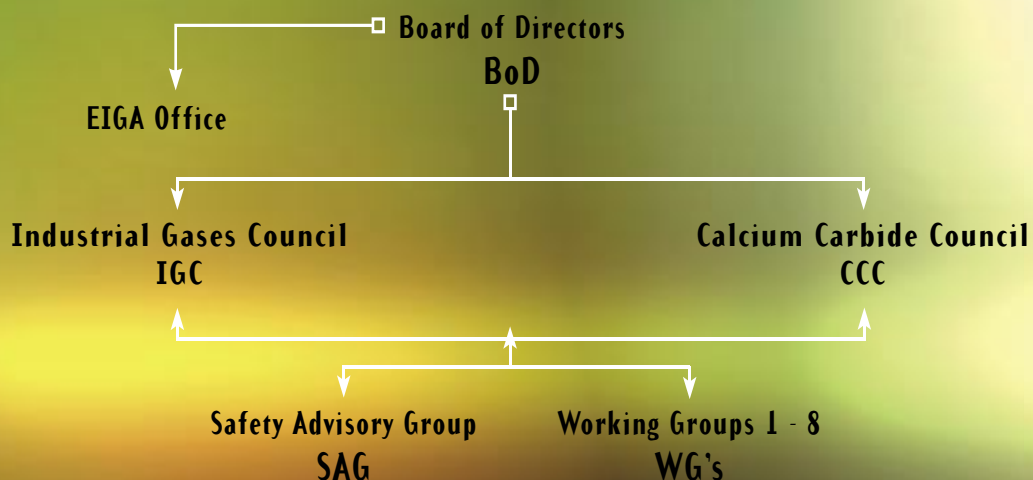
EIGA informs and provides advice to members on relevant international legislative issues and the actions required for effective compliance.

EIGA produces position papers reflecting the industrial gases industries view on specific issues.

Organization

EIGA has a President and a Board of Directors, which constitutes the governing body. The EIGA office deals with legal, financial and administrative matters and supports all technical and safety work.

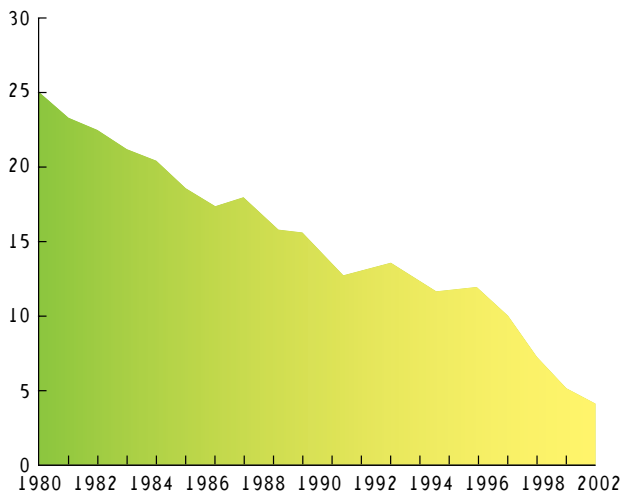
Under the supervision of the Board, the Industrial Gases Council, IGC, and the Calcium Carbide Council, CCC, direct the activities of the various working groups in their respective fields of expertise.





Lost time work injury

EIGA has monitored the lost time work injury frequencies of the member companies since 1970. The results, published every quarter as a league ranking, provide each member company with a tool to benchmark and hence to improve their performance.



Safety awards

Over the last 20 years the average work injury frequency of the member companies has decreased from 26 to 4 lost time injuries per million worked hours - a considerable improvement where EIGA played a significant role.

EIGA has introduced a number of safety awards, in order to stimulate its members' continuous efforts to improve safety.

Promote good environmental practice

Whilst the industrial gases industry has fewer apparent environmental issues than many other companies, part of EIGA's mission and objectives is to promote good environmental practice amongst the member companies. This is done by sharing lessons learnt from incidents that are relevant to the industry and by developing training tools and codes of good environmental practice.

Technical documentation

EIGA publishes a large range of useful documents, written by experts in technology and safety. Most documents can be downloaded free of charge from the EIGA website. www.eiga.org





The use of industrial and medical gases increases

The industrial and medical gases industry serves a very large number of customers in the whole community. As well as supplying the gases themselves, the industry offers services, product/process application know-how and safety advice and information to its customers.

The most common "industrial gases"

- » air gases - oxygen, nitrogen and argon
- » rare gases - such as helium, krypton, xenon and neon
- » hydrogen, carbon monoxide, carbon dioxide and nitrous oxide
- » chlorine, hydrogen chloride and sulphur dioxide
- » acetylene, methane and propane

Save lives

Nitrous oxide and oxygen have been used medicinally for more than 100 years. Other gases, such as helium, are used in sophisticated techniques such as MRI (magnetic resonance imaging), keyhole surgery and PET (positron emission tomography). Carbon dioxide is employed in bath therapy and for

cryo-surgery; liquid nitrogen is used for cryo-surgery, rheumatic therapy and cryo-conservation and nitric oxide for patients with pulmonary failure.

Improve food quality

Many of the improvements in food safety and quality have been achieved using industrial gases. Liquid nitrogen and carbon dioxide are used in high quality product freezing. These gases can also be used to maintain low temperatures for food distribution. Gas mixtures preserve the freshness of packaged meat, seafood, ready to use vegetables, cakes etc.

Carbon dioxide is very important in the beverage industry (mineral water, soft drinks, beer and wine) for carbonation and with nitrogen for bottling processes and inerting.

Increase productivity

Industrial gases are essential for almost all manufacturing. Large quantities of oxygen, nitrogen and argon are used in the steel and metal industry. Shipyards and the automotive industry use acetylene, propane, mixtures of fuel gases and oxygen for cutting and welding.

Liquid nitrogen is vital in recycling plastics, packaging and scrap tyres.

The chemical industry employs all major industrial gases as a raw material or for inerting. High purity gases are used e.g. in microchip production.





Four million customers in Europe

The world industrial gas market has a turnover of approximately 35 billion Euro (year 2003). Within Europe, the industry employs 55.000 people, has 4 million customers and the gas production is approximately 200.000 tons per day.

Most products are manufactured by the industrial gas companies in plants and then supplied to customers by one of three basic methods of supply: **pipeline, bulk or cylinder**.

Pipeline

Air gases: oxygen, nitrogen and argon are mostly produced at low temperature in "air separation units". Adsorption technology, by pressure swing or membrane are other technologies used to produce oxygen and nitrogen, generally at slightly lower purities.

These plants are generally sited close to large customers. Nevertheless, the network of transmission pipelines in Europe through which the product is supplied stretches for 5.000 kilometres.

Other gases such as hydrogen and carbon monoxide are manufactured by steam reforming of natural gas or from hydrocarbon feed stocks. Pure carbon dioxide is produced by removing unwanted impurities from natural wells and chemical waste gases.

Bulk or cylinder

Industrial gases can also be delivered in bulk by road, rail, or sea transport. Special cryogenic road tankers, rail wagons or containers are used to deliver liquefied gases into tanks located at the customer's premises.

Smaller quantities of gases or specified mixtures, products are supplied in gas or liquid cylinders.

The European industrial gases industry operates 14.000 delivery vehicles, covering 500 million kilometres per year. Around 40 million cylinders are in circulation to serve the European market.

