



company background

company history

[Who We Are](#)[Where We Are](#)[Company Background](#)[From A to Z](#)[Markets/Products/Trends](#)[Executive Directory](#)[SAP Implementation](#)[Air Products ISO](#)[Certification](#)[Supplier Information](#)[Video Library](#)[The Difference Band](#)[Site home](#)[Air Products Home](#)

A BRIEF HISTORY OF AIR PRODUCTS AND CHEMICALS, INC.

Air Products was founded by the late Leonard P. Pool in 1940 in Detroit, Michigan, on the strength of a simple, but then revolutionary, idea: the "on-site" concept of producing and selling industrial gases, primarily oxygen. At the time, most oxygen was sold as a highly compressed gas in cylinders that weighed five times more than the gas product. Air Products proposed building oxygen gas generating facilities adjacent to large-volume gas users, thereby reducing distribution costs. The concept of piping the gas directly from the generator to the point of use proved sound and technically solvable.

In the intervening years, the company has expanded its business through internal development and acquisitions. Today, Air Products (NYSE:APD) serves customers in technology, energy, healthcare and industrial markets worldwide with a unique portfolio of products, services and solutions, providing atmospheric gases, process and specialty gases, performance materials and chemical intermediates. Founded in 1940, Air Products has built leading positions in key growth markets such as semiconductor materials, refinery hydrogen, home healthcare services, natural gas liquefaction, and advanced coatings and adhesives. The company is recognized for its innovative culture, operational excellence and commitment to safety and the environment and is listed in the Dow Jones Sustainability and FTSE4Good Indices. The company has annual revenues of \$7.4 billion, operations in over 30 countries, and nearly 20,000 employees around the globe. For more information, visit www.airproducts.com. Air Products ranks 295th in sales and 277th in total assets among *FORTUNE* magazine's April 2004 list of the 500 largest corporations in the U.S. Corporate headquarters are at the company's 600-acre campus in eastern Pennsylvania's Lehigh Valley, near Allentown; European headquarters are at Hershman, near London; and Asian headquarters are in Singapore, with offices in Tokyo and Hong Kong.

Beginnings

Air Products leased its first oxygen gas generator to a small Detroit steel company in 1941. Shortly thereafter, a second order for a gaseous oxygen generator was received from the Norfolk Navy Yard. World War II diverted the company's attention to the design and manufacture of mobile generators to produce oxygen for use by the military in high-altitude flights. Air Products moved to Chattanooga, Tennessee, to take advantage of the manufacturing space and manpower available there and produced 240 oxygen generators for the armed forces and for "lend-lease" to foreign allies. During this period the company built a strong technical organization and established a tradition of response to customer needs that continues today.

Postwar Years

At the end of the war, Air Products' military contracts were terminated. The company then refocused its sights on commercial markets by setting up operations near Allentown in Pennsylvania's Lehigh Valley, close to the industrial markets of the Northeast.

In 1945, Air Products secured a contract with Weirton Steel Company in West Virginia to lease three generators to produce six tons per day of oxygen. The contract confirmed the value of the company's "on-site" marketing and financing strategy. By building and operating its own air separation plants and supplying gas "over the fence" to customers on a take-or-pay basis, Air Products became the first company to put into practice what would later become the marketing norm for the industrial gas industry. The contract was the first of many with the steel industry.

The 1950s brought more civilian business and new government and military contracts. In support of America's emerging missile and space program, Air Products began to design and manufacture plants capable of producing tonnage quantities of liquid oxygen and nitrogen. The experience gained in building these plants—and later liquid hydrogen plants—for the federal government catapulted Air Products into a major position in the commercial industrial gas business in the United States and Europe.

The company's marketing and production strategies were further refined during the 1950s. Several independent regional gas distributors were acquired and the marketing concept known as "piggy-backing" was introduced. This concept involved adding extra gas liquefaction capacity to the on-site plants. It enabled Air Products to serve its tonnage base-load gas customers, such as steelmakers, and produce and deliver additional higher-margin liquefied gases economically to other so-called "merchant" gas customers, i.e., users of smaller tanker-load quantities, in the surrounding area.

Expansion and Diversification

In 1957, Air Products entered the overseas market for industrial gases through a joint venture with the Butterley Company, a British firm to which Air Products licensed its processes and designs for the manufacture of cryogenic equipment used in industrial gas production. The new venture was called Air Products (Great Britain), Ltd. Air Products later acquired a 100 percent interest in this business and expanded its operation into the supply of industrial gases as well as cryogenic equipment.

The decade of the '60s brought further diversification. In 1961, Air Products began manufacturing chemicals via a joint venture with a petroleum refining company to convert refinery by-products into oxo-alcohols for use in producing plasticizers. A year later, the company acquired the Houdry Process Company and its subsidiary, the Catalytic Construction Company. Houdry had an international reputation in process licensing and in the production and sale of certain organic chemicals and catalysts. Catalytic was well known in the engineering and construction field and had pioneered the contract maintenance concept for the maintenance and repair of chemical and petroleum plants.

The company's position in chemicals expanded with the 1969 acquisition of Escambia Chemical Corporation, a large chemical complex at Pensacola, Florida. Escambia manufactured industrial chemicals, such as amines and polyurethane intermediates, polyvinyl chloride resins, and fertilizers.

During the 1960s, the company also expanded its overseas operations. In 1964, a 60 percent-owned subsidiary for the production of industrial gases was formed in the Benelux countries with Société Generale de Belgique S.A., a major European financial and industrial holding company. The subsidiary would ultimately become 100 percent owned by Air Products.

A short time later, Air Products established a wholly owned subsidiary in the Federal Republic of Germany. In 1969, a joint venture was established in South Africa and the company acquired an interest in what is now its wholly owned French subsidiary, Prodair.

Business was further expanded in the '70s with acquisition of the chemicals and plastics business of Airco, Inc. This added several chemical products to the company's portfolio, such as polyvinyl acetate emulsions, polyvinyl alcohol, acetylenic chemicals, and fabricated plastics. During this period the company also significantly increased production of DNT and TDA, chemical intermediates in the manufacture of polyurethane foams, and production of amines, important ingredients in agricultural chemicals.

In industrial gases, major investments were made in Western Europe, Brazil, and the United States. Many new applications were developed for industrial gases, including oxygen in cupolas, oxygen for copper smelting, inert atmospheres for heat treating metals, liquid nitrogen for the quick freezing of meats and other food products and in grinding various materials and recovering scrap metals from them.

Meanwhile in the late '60s and '70s, the company expanded its business devoted to the design of cryogenic equipment and other process and related engineering services. Processes for the liquefaction of helium gas and natural gas, and techniques for the manufacturing of giant heat exchangers for such applications, were notable technical achievements. Most of the process designs and heat exchangers for natural gas liquefaction projects around the world have been furnished by the company.

The 1980s

The 1980s continued to reflect Air Products' strategy of strengthening its base businesses. In Asia, the company took minority positions in industrial gas companies in Korea, Japan, Malaysia, Hong Kong, the People's Republic of China, Thailand, and Taiwan. Further geographic expansion occurred with joint ventures in Spain and Mexico and the acquisition of Inter-City Gas Co. in western Canada. In the United States, the company expanded by acquiring the Separex Corporation—a manufacturer of membrane gas separation systems—and the J. C. Schumacher Company, a leading supplier of high purity chemicals for the semiconductor industry.

In chemicals, plant expansions in both polymer emulsions and polyvinyl alcohol helped the company keep up with its growth in these key product lines. In addition, the acquisition of the industrial chemicals division of Abbott Laboratories in 1985 gave the company increased manufacturing capability for new specialty amines developed in Air Products' research laboratories. During this period the company also completed several acquisitions that extended its polyurethane additives business. A significant expansion of the company's emerging epoxy curing agents business was undertaken in 1988 with the acquisition of Anchor Chemical, Plc. of England.

In 1982, Air Products acquired Stearns-Roger Corporation, a leading engineering and construction services company based in Denver, Colorado. Following several years of profitable operations and a merger of Stearns-Roger with Catalytic, Inc. to form Stearns Catalytic World Corporation, business prospects dimmed, in large part due to significant declines in energy prices. In November 1986, Air Products divested the majority of its engineering services business by selling the domestic operations of Stearns Catalytic to United Engineers & Constructors, a subsidiary of Raytheon Company.

From the mid-1980s on, Air Products began to explore new businesses to take advantage of the company's proven skills in engineering, owning, and operating large-scale process plants. The company formed an environmental and energy systems business to focus its efforts in the expanding markets for power generation, air pollution control, and energy recovery from solid waste. In partnership with Browning-Ferris Industries, it formed American Ref-Fuel, a joint marketing effort to build, own, and operate waste-to-energy facilities. A general partnership with Mitsubishi Heavy Industries America, Inc. also was formed to participate in markets for air pollution control systems and services. The company also acquired GSF Energy Inc., a leader in capturing, purifying, and selling the natural gas produced in landfills.

During the 1980s, noncryogenic technologies for producing industrial gases were developed and commercialized, and the company embarked on a comprehensive effort aimed at achieving quality throughout its operations in its drive for excellence and future success.

The 1990s

In the 1990s, the company continued to invest globally. In Europe, it expanded into Italy by acquiring a 49 percent interest in Sapio, a leading Italian industrial gas supplier; and completing its acquisition of

Carburos Metalicos, Spain's leading industrial gas supplier. The company also acquired polyurethane additives and polyurethane release agent businesses in Germany.

In Asia, the company formed a joint venture with Daido Hoxan Inc. to provide gases and related chemicals, environmental systems, equipment and services to the electronics industry in Japan.

Another joint venture was formed with Showa Denko to manufacture specialty gases for semiconductor manufacturers worldwide. Air Products also established a new company in Singapore; formed a joint venture in Indonesia which is now wholly owned by Air Products; began producing polymer emulsions in Korea; and opened new facilities at Tsukuba, Japan, to supply a variety of gas and chemical products to semiconductor manufacturers throughout Asia.

In Latin America, the company increased its equity position in the industrial gases businesses of the INFRA Group in Mexico, and established a new chemical subsidiary and purchased a polymer emulsion business in the country. In Brazil, Air Products opened a polyurethane technical service laboratory and new warehouse facilities; acquired the amines business of Quimica da Bahia, formerly Brazil's largest amines manufacturer; and invested over \$100 million in industrial gas production facilities to serve petrochemical, paper and other industries.

Additionally in the 1990s, the company acquired Permea, Inc., a leading supplier of membrane and adsorption gas separation systems that complement Air Products' internally developed membrane and adsorption technologies. As a result of the acquisition, the product mix that Air Products can now offer in noncryogenic gas supply systems is one of the broadest available in capacity, purity and cost-effectiveness.

Other important developments in the 1990s included Air Products' sale of its polyvinyl chloride business and its exit of the merchant ammonia business. Both actions were consistent with the company's strategy in chemicals of focusing on product lines where Air Products has leading market positions and high prospects for profitable growth.

After a decade of success in building an environmental and energy systems business, in 1996 Air Products determined that because of fundamental changes in the U.S. solid waste and power markets, its strategy for this business would be very different going forward. The company subsequently sold its landfill gas recovery business; divested its share of its American Ref-Fuel waste-to-energy business; and "bundled" power generation with industrial gases. These moves reflect Air Products' intent to enhance shareholder value by concentrating its attention and resources on its core gases and chemicals businesses.

The New Millennium

The 1990s were a period of unprecedented change and growth. Air Products entered the new millennium challenged to find new paths to success and eager to take on new, exciting

opportunities. After an attempt to acquire half the assets of competitor BOC Group failed to gain regulatory approval, Air Products' senior management developed an aggressive, long-term business strategy focused on portfolio management, work process improvement, and growth.

The company is now deeply involved in several, company-wide initiatives consistent with this strategy and aimed at delivering profitable growth. They include:

- evaluating all businesses to determine their growth potential and assign them appropriate resources;
- planning of acquisitions of businesses that will advance our performance and divestitures of segments in which we are not the high-value provider;
- implementing an enterprise resource planning tool to streamline and unify the operations of the company;
- organizing globally to strengthen our international operations and performance; and
- focusing on businesses, processes and systems that will improve our return on capital and earnings growth.

Recent major moves include the divestiture of our polyvinyl alcohol business and most of our U.S. packaged gas business. Both actions have been recognized by investors as prudent and beneficial.

Additionally, in October 2002, Air Products entered the U.S. homecare business with the acquisition of American Homecare Supply (AHS), a privately-held corporation ranked among the ten largest U.S. homecare providers of respiratory therapy and home medical equipment. Air Products has been providing products and services to the medical industry for over 50 years. With the AHS acquisition, the company and its affiliates will be providing home medical services to more than 275,000 patients in 14 countries from more than 200 locations. Air Products has also acquired Sanwa Chemical of Japan, broadening our position in epoxy chemicals in Asia.

In the new world economy, Air Products is ready for competition and positioned for growth.

July 2003



[Printing Instructions](#)

Would you like more information? [tell me more](#)

Copyright © 1996-104 by Air Products and Chemicals, Inc.

LEGAL NOTICE

[Products](#) | [Markets](#) | [E-Business](#) | [Technology](#) | [About Us](#) | [Investor Information](#) | [Corporate Responsibility](#)

