

Trouvay & Cauvin:

Renaissance of an international group

Trouvay & Cauvin Group is an innovative company with a clear vision: Channelling Energy. Although the company's history dates back to 1881, this vision is firmly focused on the future. Over the decades the company has overcome every major crisis it has faced, including its own restructuring in 2002 and the economic crisis of 2009.

Today, Trouvay & Cauvin Group is building on its strong foundations in the Gulf to expand into other markets, including the USA, Asia and India. The company aims to be a Global Piping Solutions Provider, offering quality products that are reliable and cost effective, supported by a team of technical and commercial experts.

“The clear-sightedness of our founders and the ambition of their successors are part of our DNA. Each day we are inspired by their achievements to write a new chapter in the history of our company.”

Laurent Marie, CEO of Trouvay & Cauvin Group

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Trouvay & Cauvin Group: a strategy guided by a clear vision

In partnership with its customers in Upstream, Midstream, Downstream, Energy, Process Industries, Construction and Water markets, it helps them improve the performance of their projects by providing global piping solutions. Each solution is comprised of quality products that are as reliable as they are cost effective. Each is backed up by a best-in-class team of technical and commercial specialists.



A key advantage that Trouvay & Cauvin Group brings to its customers is a full-service approach. It provides piping solutions that span the full lifecycle of projects, from technical consulting, sourcing, procurement and product preparation to testing and pre-commissioning, and from project management to service and maintenance.

Global piping solutions provider

Trouvay & Cauvin Group's ambition is to become the global piping solutions provider of choice for the world's major EPC (Engineering, Procurement and Construction) contractors and major end users. From its base in the Middle East, the company is expanding carefully and quickly into new sectors and new geographies.

In 2002 the company's turnover was US\$20 million. Today it is close to US\$ 200 million. In five years time the goal is to reach US\$500. Despite the tough economic climate of the past couple of years, the company has continued to grow, thanks mainly to an increasingly diversified business model.

Success Story FPSO in Brazil

To produce oil in Brazil's Frade offshore field in the Campos basin, the decision was made to convert the Lu San very large crude carrier into a Floating Production Store and Offloading (FPSO) vessel.

Designed for use in deep sea production, it can handle 100,000 bpd of oil and 106 million cubic feet of natural gas.

Trouvay & Cauvin Group were selected to provide the high grade X52/X65 pipes and carbon steel pipes required to meet the operating requirements of the FPSO, a total of over 600 metric tons.

Currently around 70 percent of the company's revenues are generated by the oil and gas sector, with another 15 percent of turnover coming from building and infrastructure. An increasing number of partnerships with international contractors are enabling Trouvay & Cauvin Group to strike lucrative deals in other parts of the globe, including the US, Asia Pacific and India. For instance, it recently formed a piping packaging deal with Daewoo Engineering & Construction, valued at close to US\$40 million.

Geographical expansion

The company's ambitious growth will be driven mainly by new revenue streams generated by expanding operations within the Asia Pacific, US and India. Already present in the Middle East, with offices in Bahrain (1), United Arab Emirates (4), Saudi Arabia (4), and Qatar (1) the company is branching out. In 2010 the company opened three new offices in the US, Asia Pacific and India. It is also working on expanding its presence into Central Asia and North Africa as well as opening several branches in India.

Trouvay & Cauvin Group: 130 years of expertise

Origins

The roots of Trouvay & Cauvin Group stretch back to 1881, with the founding of Trouvay & Cauvin in Le Havre, France, by Georges Trouvay and César Cauvin. The company began as an industrial supply store providing pipes, valves and gauges to the ocean liners that traveled between the French port city and New York.

Quite quickly the firm grew to become a recognized specialist in pipes, tubes, valves and other equipment for the oil & gas, water and building sectors. It also became a leading manufacturer of valves. Through the first half of the twentieth century, Trouvay & Cauvin focused on growth in France, becoming one of the country's leading industrial companies with eight branches nationwide. In the 1950s it became an active participant in the French civil nuclear energy program.

International growth

1962 saw the beginning of Trouvay & Cauvin's operations in the Middle East, while in 1967, the firm expanded in Europe.

The 1970s was a period of significant expansion in the Middle East, with the development of facilities in Saudi Arabia and the opening of offices in Qatar, Dubai, Saudi Arabia, Abu Dhabi and Bahrain. In 1976 it was awarded the French government's prize for export and opened an office in Houston, Texas. In 1978 the Middle East offices were merged to create a single company called Trouvay & Cauvin Gulf, which was incorporated in Bahrain. This entity went on to be known as T&C Gulf.

Turbulent times

The slowdown in the energy sector between 1998 and 2000, and the subsequent collapse in investments, pushed the French parent company into liquidation in 2002. During these trying times, Trouvay & Cauvin Gulf remained strong and financially healthy. It was untouched by the parent company's woes, unlike many of the overseas subsidiaries, which were sold off in management buy-outs.

Renaissance of an international group

The true spirit of César Cauvin and Georges Trouvay today resides in Trouvay & Cauvin Group, which encompasses the firm's local subsidiaries in key geographies, including Trouvay & Cauvin Gulf, Trouvay & Cauvin Asia Pacific, Trouvay & Cauvin USA and Trouvay & Cauvin India.

Today Trouvay & Cauvin Group continues to build on the parent company's original values and expertise. While other companies may sport the Trouvay & Cauvin name, only the "Group" signature provides the strength of over US\$ 40 million in permanent stock in three locations and US\$ 29 million in capital and retained earnings.

Markets: Meeting 21st century challenges

Trouvay & Cauvin Group has more than 130 years of experience providing piping solutions to the energy sector and in managing projects of all sizes and complexities regionally and globally. In recent years it has expanded beyond energy into new sectors, including process industries and construction.

Oil and Gas

Upstream

This market includes the exploration and production (E&P) of oil and gas fields. It also includes wells that recover and transport crude oil or raw natural gas to the surface. Trouvay & Cauvin Group has a special division fully dedicated to upstream applications.

Midstream

The midstream industry processes, stores, markets and transports crude oil, natural gas, liquid natural gases, (mainly ethane, propane and butane) and sulfur.

Downstream

The downstream sector refers to the refining of crude oil and the sale and distribution of natural gas and products derived from crude oil. It is comprised of oil refineries, petrochemical plants, distribution networks and retail outlets.

Success Story

Ruwais Refinery Expansion Project

To meet growing demand for refined products as well as stringent product quality requirements and environmental legislation, Abu Dhabi Oil Refining Company (TAKREER) is expanding the refinery at Ruwais. When completed, the site will have a total refining capacity of 800,000 barrels a day (b/d).

The contractor Daewoo Engineering & Construction called upon Trouvay & Cauvin Group to provide 27,000 tons of low temperature carbon steel, seamless steel and welded pipes.



Energy and Process Industries

Energy generation

Maximizing energy efficiency, reducing CO2 emissions and combating climate change are the main challenges facing the power generation sector in the decades ahead. The quality and energy efficiencies of piping systems and valves are important factors when designing next-generation energy generation stations.

Geothermal

The reliability and cost-effectiveness of a geothermal plant depends greatly on the quality of piping systems. Corrosion is the main enemy. It is caused by the salinity of the geothermal water and the corrosive minerals and gases that are separated from the geothermal water as it circulates through the system. High pressures can also fatigue tubing and wreak havoc with valves and instrumentation. Pipe systems must be able to withstand these conditions.

Chemicals

Hygiene and product integrity are two of the most important aspects of any piping system in the chemicals industry. The quality of the internal surface of the pipe has a direct impact on product quality and cleanability.

Biodiesel

The choice of pipe technology can have a direct impact of capital costs and the speed to market for contractors building biodiesel facilities. In addition, pipe systems have to be able to withstand the chemical properties (caustic, corrosive) and temperatures of the fluids that are handled in biodiesel production.

Success Story Alstom

When Alstom was awarded the contract to build two identical power plants in South Africa, with a total gross generating capacity of nearly 4800 MW and featuring state-of-the-art FGD technology, it went looking for single source of advanced piping solutions. It picked Trouvay & Cauvin Group, because of its ability to provide a complete package of carbon steel, low temperature carbon steel and stainless steel, seamless steel pipes, fittings and flanges – a package solution worth over \$10 million. By simplifying the sourcing, stock management and commissioning challenges, Trouvay & Cauvin Group helped contribute to a lower total cost of ownership for Alstom.



Construction & Infrastructure

Construction

Sections, plates, pipes and valves lie at the heart of today’s modern construction and infrastructure projects, ranging from airports, metro stations and water treatment systems. They are found inside structures and underground, channelling vital gases and fluids in HVAC (Heating, Ventilating, and Air Conditioning), fire protection and drainage applications.

Water

With the rapid pace of urbanization, desalination, water recovery and water conservation are becoming increasingly important. With over 130 years of expertise, Trouvay & Cauvin Group helps customers meet their requirements for environmental protection, water quality and affordability for a wide variety of projects, from desalination to water treatment, cooling to irrigation.

**Success Story
Dubai Metro**

The Dubai Metro is the world’s longest driverless, fully automated metro rail system under construction. It is comprised of 41 sky stations and 4 underground stations.

When the contractor, a joint venture between ETA and SET, required a complete system of galvanized steel pipes for the fire protection system, it turned to Trouvay & Cauvin Group. The company was able to provide the stock capacity required by this fast-track project and all products were 100% UL/FM rated and air tested in the factory.

Solutions: a global offering

Trouvay & Cauvin Group provides a full range of project solutions, products and services.

Project solutions

As a global supplier of piping solutions, Trouvay and Cauvin Group's expertise extends well beyond products and services. It includes value added services, such as:

- **Technical Consulting:** Helping customers identify key areas of potential improvement in pipe and valve selection, specification, asset management and system design.
- **Sourcing & Procurement:** Thanks to privileged relationships with the world's leading mills and valve makers, Trouvay & Cauvin Group is able to deliver the best products anywhere in the world, regardless of the size or complexity of the project at the most competitive price.
- **Product Preparation:** Painting/coating services delivered at Trouvay & Cauvin Group's on-site coating facility or through reputable third parties. It is the only service of its kind in the Gulf region.
- **Testing and Pre-commissioning:** A complete range of tailored post-installation services, including testing and pre-commissioning, for all of a customer's valves.
- **Project Management:** Managing the delivery, transportation and storage of a construction project's entire pipe package project.

Success Story Lindenberg Emirates

Lindenberg Emirates was awarded the construction of a vast water transmission system for Saadiyat Island. The project began in 2008 and is scheduled for delivery in 2011.

The transmission system will meet the demands for potable water in Saadiyat Island, Al Reem Island, Al Raha Beach Development and Lulu Island - and increase the security of supply to Abu Dhabi Island.

Lindenberg picked Trouvay & Cauvin to supply 10km of 48-inch specially coated piping required to connect mainland Abu Dhabi to Saadiyat Island via Yas Island. Thanks to its sourcing, coating and supply chain expertise, the 17 million US\$ package was delivered to specifications and ahead of schedule.

Products

Trouvay & Cauvin Group provides steel pipes and other products for a wide range of applications. They are sourced from the world's leading steel mills and equipment manufacturers.

- **Process Pipes, Line Pipes**, Flanges and Fittings for oil & gas, chemical, petrochemical, water supply and waste treatment.
- **Valves and actuators** from the world's leading manufacturers, for application needs in oil & gas, industry, energy and chemicals.
- **Structural steel** components, including beams and tubulars, used in steel-frame constructions.
- Plates and tubes for building **pressure vessels, boilers and tanks** used in the oil & gas and other industrial sectors.
- Products for handling all the aspects of a **steam and condensate system**, from the steam production to distribution, and from the point of use to the return of the condensates to the boiler.
- Comprehensive range of **switches, gauges, sensors, transmitters** and other instrumentation for controlling piping systems.
- **Piping for Building & Infrastructure:** Pipes, valves, instrumentation and other accessories for **HVAC** (Heating, Ventilating, and Air Conditioning), **fire protection** and **water supply** systems used in commercial and high-rise construction, airports and public transportation.

Success Story

Abu Dhabi Crude Oil Pipeline

The ADCOP project is an onshore project that will transfer crude oil from Habshan production facilities to the main oil terminal (MOT) in Fujairah, on the eastern seaboard of the UAE.

The pipeline is approximately 371 km in length and will handle 1.5 MMBPD of crude oil. The main components are a 48" pipeline from ADCO to Fujairah MOT.

Trouvay & Cauvin Group supplied all the piping requirements for the Main Pump Station (MPS) in Habshan area, the Intermediate Pump Station (IPS) in Sweihan, MP21 and the MOT in Fujairah, a contract worth over US\$55 million.



Services

Trouvay & Cauvin Group provides a complete range of services for pipe and valve projects:

- **Steam surveys and energy audits** help customers lower energy costs by identifying hidden causes of waste in steam traps and networks.

- Trouvay & Cauvin Group **Valve Automation Centers** provide a wide range of services to optimize the operational lifespan of valves and actuators. These includes actuation for new valves and retrofitting for existing valves.
- **Valve interlocking** is used to prevent valves from being used incorrectly Trouvay & Cauvin Group performs interlocking surveys to select the right products, and then performs installation and commissioning.
- **Valve maintenance, repair and testing** services to optimize the operational lifespan of valves and actuators
- A full range of **pipe finishing services** for product preparation, from blasting to coating.

Capabilities: Logistics power of a global leader

The services provided by Trouvay & Cauvin Group extend well beyond simply sourcing piping. They involve taking a broad project management role with each client. The company manages the order of piping from third-party manufacturers, arranges the transport logistics along with supplying all the required accessories. These capabilities are supported by unique capabilities that its competitors cannot match.

Stock



Trouvay & Cauvin Group has one of the largest stocks of pipes, structural steel, valves, fittings and flanges in the Gulf. At any given time it has over 40,000 tons of stock on its premises, including 15,000 tons of process pipes, 3,000 tons of structural steel plates, seamless and welded tubulars, plus a full range of valves, fittings and flanges, including non-standard items.

Yards



Trouvay & Cauvin Group has three yards in the Gulf region (Jebel Ali, UAE; Doha, Qatar; and Jubail, Saudi Arabia). The size of the yards enables the company to handle order volumes that other companies cannot.

In addition, the geographical coverage means customers have flexible access to a full range of services and puts the stock close to building sites and the region's major transportation gateways. Transportation by road to UAE, Kuwait, Kingdom of Saudi Arabia, Oman, Bahrain, Jordan, Iraq, Yemen and State of Qatar is available from all the yards, as is transportation by sea with regular line bulk and containers to other destinations.

Partnership

To provide specialized solutions for its customers, Trouvay & Cauvin Group has established partnerships with a number of leading companies in specific sectors of the energy industry.

One of these, for example, is with Vallourec & Mannesmann Tubes (V&M Tubes), one of the world's largest manufacturers of seamless steel tubes. Trouvay & Cauvin Group was the first company to become one of V&M Tubes' official process pipe distributors, a testament to the depth of the relationship between the two companies.

Another key partnership is with Armstrong International, a world leader in steam, air and hot water products and energy management. Armstrong recently signed a deal making Trouvay & Cauvin Group the sole distributor of its steam products and services for OPC industries in the key Gulf markets.

Trouvay & Cauvin has also signed partnerships with leading construction companies, including a US\$17 million piping package deal with Lindenberg Emirates for the supply of 10km of 48-inch specially coated piping required by a vast water transmission system for Saadiyat Island.

Values: Solid foundations

Throughout its 130-year history, Trouvay & Cauvin Group has been able to overcome all challenges, ranging from world wars to its own restructuring in 2002 and the economic crisis of 2009. The secret? A solid set of values.

Entrepreneurship

Trouvay & Cauvin Group's entrepreneurial spirit can be traced back to its long-standing relationship with the energy industry. Meeting the challenges of this fast-moving, cyclical sector has forged the company's collective character.

Excellence



Trouvay & Cauvin Group is dedicated to providing the best products and technical solutions. It also prides itself on the excellence of execution and the quality of the human relationships it has with customers.

A clear example of the company's commitment to excellence is the triple certification (ISO 9001, ISO 14001 and OHSAS 18001-2007) of its stock and main logistic platform in Jebel Ali, U.A.E. All the company's other offices and stocks are certified ISO 9001. Another example is the recent certification of the Jubail Yard in Kingdom of Saudi Arabia by ARAMCO.

Trust



In the high-stakes world of industrial and construction projects, customers can count on Trouvay & Cauvin Group to be there from start to finish. Not only does the company keep its promises, it makes sure the job gets done. Customers can count on Trouvay & Cauvin Group to be there today and tomorrow, just as it has been for over 130 years.

Competitiveness



Trouvay & Cauvin Group's prices are always fair and the company focuses on total cost of ownership in order to help customers manage costs over the life of the project. Moreover, innovative contractual services, such as fixed pricing and buy-back, help them optimize budget management.

Peace of mind

Trouvay & Cauvin Group's operations are scaled and organized to meet a wide variety of logistical and operational requirements, thanks to its logistic platforms and stock levels that none of its competitors can match. Technical services, such as valve actuation and repair, make owning a solution from Trouvay & Cauvin Group as easy as buying one.

Social responsibility

Thanks to Trouvay & Cauvin Group's longstanding involvement in the energy sector, early on it developed clear and comprehensive policies governing the way it handles the environmental, health and safety issues that affect its business, its people and its communities. But these policies would be nothing if it was not for the dedication of its people. That why it places them at the heart of the company, and makes significant investment every year in their health, safety, training and career development.

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