Fluence Corporation

Industrial Water & Reuse

STATEMENT OF QUALIFICATION

We deliver cost-effective water, wastewater, and reuse solutions that protect the environment and provide reliable water supplies that exceed our customers' expectations.

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Industrial Water Solutions

Fluence serves a wide range of customers, from small communities, real estate developments, shopping malls, hotels, and golf courses, to large municipalities and industrial customers in power, mining, chemical processing, refining, food and beverage, and more.

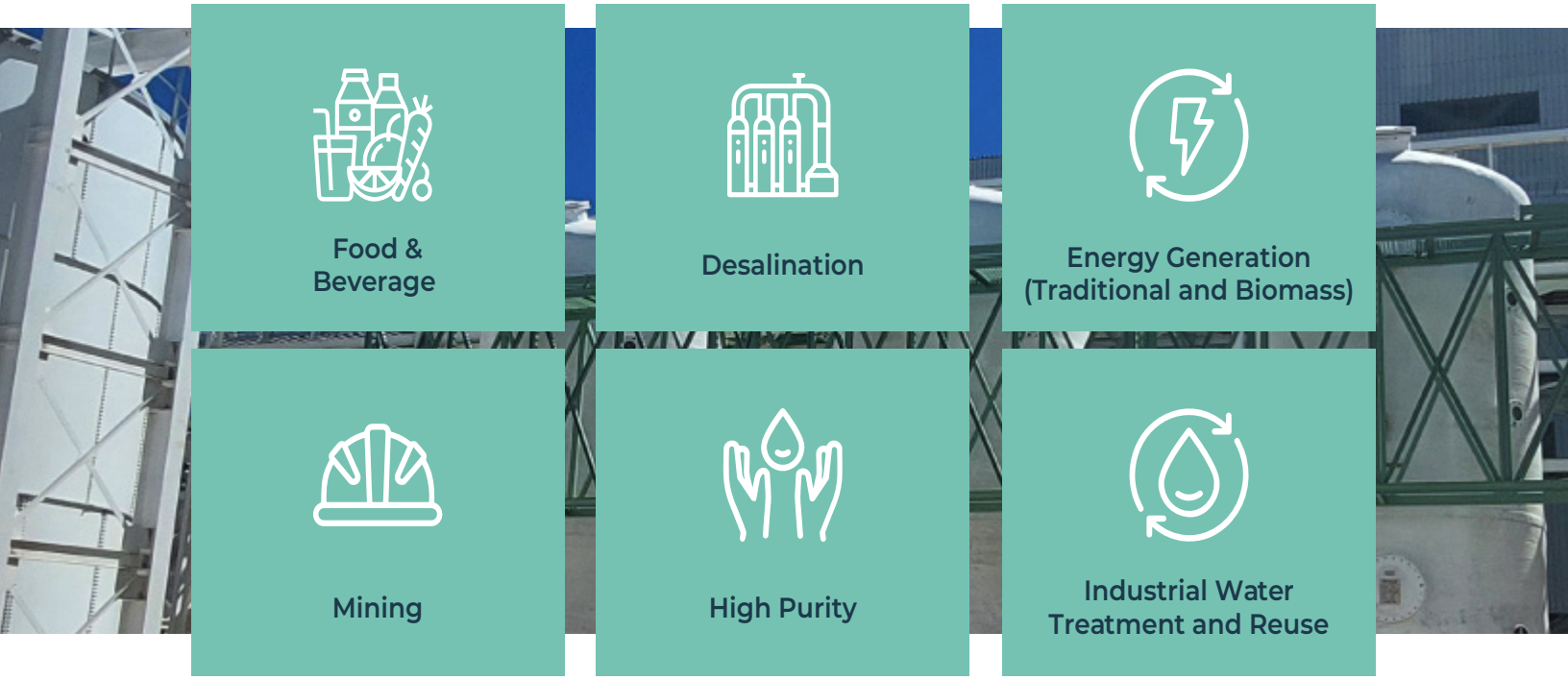
Fluence is at the forefront of industrial water treatment, offering innovative, sustainable solutions that empower businesses to take control of their water resources while reducing costs and enhancing environmental stewardship. With over three decades of expertise, we've successfully implemented more than 1,000 projects across 70 countries, solidifying our position as a global leader in decentralized water and wastewater treatment.

Value Proposition

- **Rapid Deployment:** Our containerized, pre-engineered solutions ensure quick installation and operation.
- **Decentralized Approach:** Treat water at the source, minimizing infrastructure needs and environmental impact.
- **Cutting-Edge Technology:** Advanced membrane systems, including UF, NF, RO, and EDI for superior water quality.
- **Comprehensive Solutions:** From design to operation, from custom solutions to pre-engineered containerized plants, we offer end-to-end services tailored to your specific needs.
- **Global Expertise, Local Focus:** We leverage worldwide experience to address each customer's unique challenges.

Core Markets

- **Food and Beverage:** Enhance product quality and safety through advanced water treatment for bottling manufacturing.
- **Energy:** Optimize performance in thermal power generation.
- **Manufacturing:** Improve efficiency in steam and cooling water systems.
- **Mining:** Support sustainable extraction processes. Containerized water and wastewater treatment for worker camps.
- **Seawater Desalination:** Secure a trusted, independent water source in coastal regions.



Technologies

Advanced Treatment Systems:

- Ion exchange (IX)
- Sand filtration (MMF)
- Microfiltration (MF)
- Nanofiltration (NF)
- Ultrafiltration (UF)
- Reverse Osmosis (RO)
- High Pressure Reverse Osmosis (HPRO)
- Continuous Electrodeionization (CEDI)
- Biological filtration

Advanced Disinfection

- Ultraviolet (UV) Radiation
- Ozonation (O3)
- Chlorination

MBR

Denitrifying agents

Activated carbon

Softeners

Granular Activated Carbon (GAC)

Dissolved air flotation (DAF)

Applications

- Arsenic removal
- Lithium extraction technology
- Lithium brine treatment
- Boiler optimization / Boiler feed water – RO to prevent scaling and corrosion
- Cooling water tower conditioning / Cooling tower blowdown
- Water Reuse / Tertiary treatment for reuse
- Resource Recovery
- Seawater desalination, groundwater, and surface water treatment
- Boron removal
- Hot water sanitizable reverse osmosis (HSRO)
- Wastewater treatment to reduce discharge volume and allow reuse
- Water and wastewater treatment systems for mining camps

Solutions

Process Water Treatment to ensure that the water used in industrial processes is of high quality and meets the required specifications.

Reuse of Industrial Water through the treatment of wastewater for reuse, providing new sources of water for various uses while reducing freshwater withdrawals. Offerings include the NIROBOX™ containerized system, dissolved air flotation (DAF), UF, UV, RO, and AOP.

Water Treatment of Boilers and Cooling Towers to remove impurities and solids to prevent scale formation and corrosion while reducing biofouling risks in industrial equipment.

Industrial Wastewater Treatment to remove pollutants in the effluent generated in the industrial process and comply with environmental discharge permits.

Demineralization by Ion Exchange Systems or Resins are used to remove specific ions, such as chloride and sulfate, from industrial water.

Disinfection by Chlorination, Ozonation or Ultraviolet (UV) Radiation to remove pathogenic microorganisms from industrial water.

Desalination of Seawater Using Reverse Osmosis Membranes to generate water suitable for industrial applications.

Removal of Hardness, such as Calcium and Magnesium to prevent scaling in industrial equipment.

After-Sales Technical Assistance Service and Spare Parts to ensure uninterrupted operation of the systems.

Remote Monitoring Service through TAMI for constant control and optimization of water quality parameters.

Installations & References

Fluence has vast experience across a range of geographies and industries - with over 1,000 projects worldwide. We have delivered over 350 water treatment plants for industrial customers, and many happy customers have returned for additional collaborations. Below is a selection of Fluence installations. For references, please contact us.

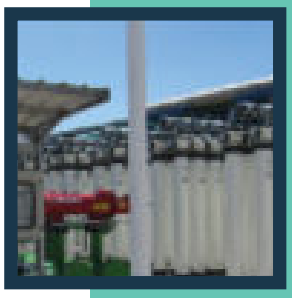
AWARDS
ALADYR
2022
Best desalination project

Arcelor Mittal Steel Mill
Seawater Desalination Plant

This seawater desalination plant has a production capacity of 3.2 million gallons per day (mgd) of demineralized water for industrial use at steel mill. It utilizes a treatment configuration without intermediate break tanks, featuring self-cleaning disk filters followed by seven ultrafiltration (UF) trains. These UF trains feed into five two-pass reverse osmosis trains, producing demineralized water with a sodium content of less than 5 mg/L.

Monster Energy Beverage, Coca Cola Femsa
Demineralized Water Production

Faced with the need to expand, Femsa Itabirito sought a water treatment system for demineralized water production. Fluence engineered a reverse osmosis system with a high permeate recovery, slashing raw water consumption by a staggering 66 GPM. From PTAP dechlorinator filters to ultrafiltration and a dual-stage reverse osmosis (RO) system with precision cartridge filters, every step was meticulously designed. The 100% operational RO system, seamlessly integrated with an ultraviolet (UV) system, delivered a flow of 484 GPM of demineralized water.



Dow PBB Polisur
Water Treatment for Cooling Systems

In 2016, Argentina implemented a water treatment project with a production capacity ranging from 650 m^3/h to 750 m^3/h of treated water. The project utilized advanced technologies, including self-cleaning mesh filter systems designed for the removal of suspended solids, as well as an ultrafiltration system (Dow IP-77-18) to ensure high-quality water treatment.

Gas Atacama Power Company

Modular Plant Demineralizes Seawater for High Pressure Boilers

The modular plant produces 500 gpm of demineralized water from seawater for use in a high-pressure boiler. With a modular design composed of ultrafiltration pretreatment and two pass reverse osmosis, followed by electrodeionization, the demineralized water features a conductivity of less than 0.07 µS/cm and a silica content of less than 10 ppb.

JBS Meat Processing

Tertiary Treatment of Pretreated Meal Processing Wastewater for Reuse

Wastewater Reuse Plant treats the JBS wastewater allowing the plant to produce its own high quality service water. The system includes ultrafiltration and an ultraviolet system with a treatment capacity of 660 gpm.

Services

- Remote monitoring (TAMI)
- After-sales technical assistance and spare parts
- Redesign and increasing capacity of existing plants
- Pilot plants

Financing

- Leasing options
- Packages to deliver water and wastewater treatment plants as a service, with Fluence assuming project risk and client paying a monthly fee
- Turnkey packages include financing, constructing and operating water assets under build-own-operate (BOO), build-operate-transfer (BOT), system leases, and reuse-as-a-service (RaaS)

Team Experience

We are a global team of engineers, scientists, and professionals passionate about changing the world of water through innovative, sustainable technologies.

Benjamin Fash
CEO and Managing Director

Ben Fash is the CEO and Managing Director of Fluence Corporation, bringing more than 20 years of water-industry and capital-markets experience. He combines deep operating expertise with a strong track record in M&A, financial management, capital raising, company building and strategic leadership. Mr. Fash joined Fluence in 2023 as CFO, where he played a key role in the company's strategic transition and turnaround. Prior to joining Fluence, he served as CFO of Dumas Mining and as EVP & CFO of Newterra, a global provider of modular water and wastewater treatment solutions. At Newterra, he partnered with private equity owners to double the size of the business through organic growth and M&A while dramatically increasing profitability and improving cash flow management, culminating in a successful exit in 2020.

Richard Cisterna
Chief Growth Officer

As Chief Growth Officer at Fluence, Rick Cisterna leads strategies for revenue growth and market expansion in high-priority markets, focusing on market trends, competition, products, pricing, sales approach, and channel partnerships. He oversees Fluence's Global Water Services business unit, key account management, marketing, and rep and agent networks, while ensuring consistent reporting and incentives for the global sales team. Mr. Cisterna brings 30 years of leadership and business development experience in the water and wastewater sector, having directed more than US $1 billion in projects across municipal, industrial, and commercial markets. Before joining Fluence, he was Founder and President of Renewable Organics Infrastructure, and served as Executive Vice President of Business Development at Natural Systems Utilities. He also spent nearly two decades at Hazen and Sawyer as a partner leading business development, strategic planning, and major project execution. Mr. Cisterna holds an M.S. in Environmental Engineering from Stanford University and a B.S. in Civil Engineering from the University of Nevada, Reno.

Manuel García de la Mata
VP, Industrial Water Treatment

Manuel oversees strategy and operations for industrial water treatment solutions. With over 15 years at the company, he has held key leadership roles, including General Manager for South America, where he spearheaded regional growth and managed major projects. Previously, he served as VP of Operations & Technology, driving technological advancements and process optimization to improve efficiency. Since 2022, he has been a board member of ALADYR (Latin American Association of Desalination and Water Reuse), contributing his expertise in desalination and water reuse. Additionally, since 2015, he has been dedicated to training engineers as Head of Practical Work at the National University of Mar del Plata.

Team Experience

Jared Galligan
Director of Engineering, Industrial Water

Jared Galligan is a licensed professional engineer with 17 years of industrial and municipal water treatment experience. He has designed, commissioned and supported hundreds of water treatment systems across food and beverage, biofuels, power, microelectronics and many other industries. A published author in several trade magazines, Jared has developed several minimal and zero liquid discharge treatment systems and designed many water reuse systems as well. He has held roles ranging from applications and sales engineer to director of engineering at global water treatment equipment suppliers.

Jordan Previte
National Sales Manager - Industrial Water & Reuse

Jordan Previte brings over 10 years of experience in the water treatment industry, helping a broad range of clients solve their most challenging water quality issues. He's worked extensively with customers in both municipal and industrial sectors, delivering solutions tailored to their unique operational needs. Jordan has strong expertise with both mobile treatment systems and capital equipment, working closely with customers to design practical, effective solutions that deliver real results. Jordan is the National Sales Manager for Fluence's Industrial Water & Reuse group in North America.

Pablo Gómez
Business Development Manager, South America

Pablo has more than 20 years of experience throughout the entire value chain in the water, wastewater, and reuse treatment industry throughout South America.
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José Roberto Ramos
Business Development Manager, Brazil

José has been at Fluence for the past ten years, where he is focused on identifying opportunities and developing solutions together with clients in Brazil.
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About Fluence

Fluence is a leader in the wastewater treatment and reuse, high-strength wastewater treatment, wastewater-to-energy, industrial, and drinking water markets, offering custom solutions as well as pre-engineered packaged plants and units, retrofits, greenfield plants, and shortcut nitrogen removal. A number of solutions feature Fluence's proprietary MABR technology, which offers high nutrient removal with a small footprint and low energy consumption. In addition to rapid delivery and commissioning of solutions to meet a broad range of needs from smaller communities to city-scale systems, Fluence offers ongoing operation and maintenance support, Build Own Operate (BOO), and other recurring revenue solutions. Fluence is headquartered in Minneapolis, USA, and has a broad international footprint with experience in more than 70 countries worldwide.

Headquarters:
Minnesota, USA

Offices:
Jundiaí, São Paulo, Brazil
Shanghai, China
Caesarea, Israel
Karmiel, Israel
Padova, Italy
Buenos Aires, Argentina
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Victoria, Australia
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