



**ALUCOR**

# **WATER & POWER**

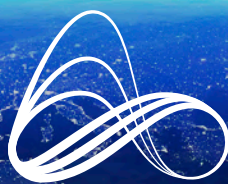
Empowering Sustainable Development,  
the **ALUCOR** way.

[www.alucor.com](http://www.alucor.com)



**WORKING TOGETHER FOR A CLEANER,  
MORE SUSTAINABLE FUTURE.**

**ALUCOR** brings decades of experience, extensive sector understanding, and modular construction to our water and power projects.



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## Water.

**ALUCOR is an industry leader in providing engineering, manufacture, construction and maintenance solutions for projects in the water sector.**

**T**here are several existing technologies available in the water treatment industry for desalination, wastewater, and sewage treatment.

Having long term partnerships with industry leading technology providers, years of industrial construction expertise and state-of-the-

art manufacturing facilities, **ALUCOR** is a perfect partner for EPC requirements related to projects in the water industry. Our fit-for-purpose approach improves performance and reduces risk across the project lifecycle – safely, efficiently, and cost-effectively.

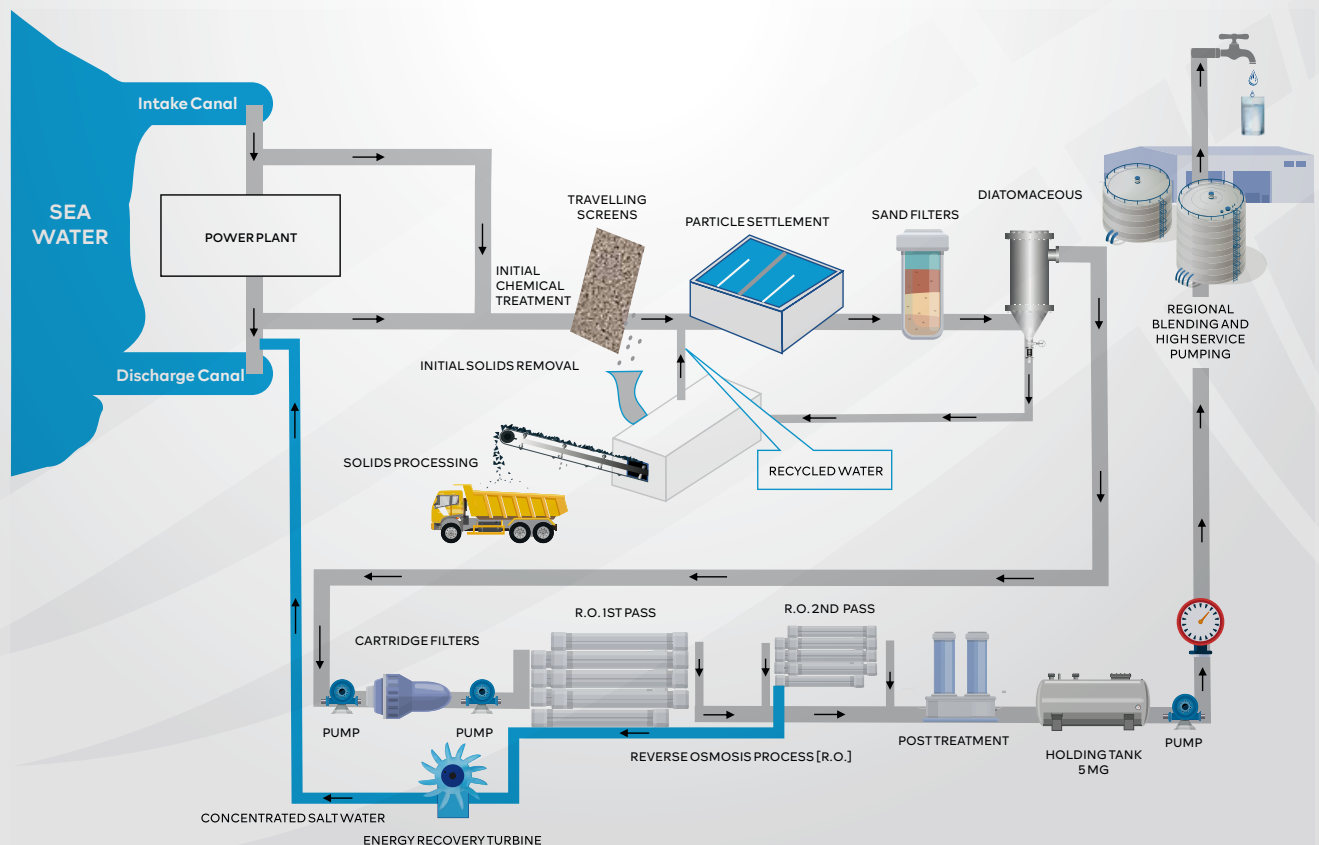
# Desalination.

As the gap between water demand and supply is increasing, desalination is an alternative, feasible and reliable source of water to ensure water sustainability.

**T**he number of desalination projects is thus expected to continue to rise worldwide, for the foreseeable future. From turnkey design and build solutions for complex Independent Water Plants (IWP) and Sea Water Reverse Osmosis (SWRO) Plants to manufacturing, construction, upgrade, and maintenance services for new and existing desalination plants, we work to understand and deliver each customer's

unique project requirements, while maintaining the highest standards of safety and quality. Our broad-based expertise and decades of execution experience with multiple technologies such as Multi-Stage Flash (MSF) desalination, Multiple Effect Distillation (MED), and most notably Reverse Osmosis (RO) have positioned **ALUCOR** to become one of the leading solution providers in the water desalination sector globally.

**Our product and service offerings for Water Desalination Projects span the complete project cycle as shown below:**



# Wastewater Treatment.

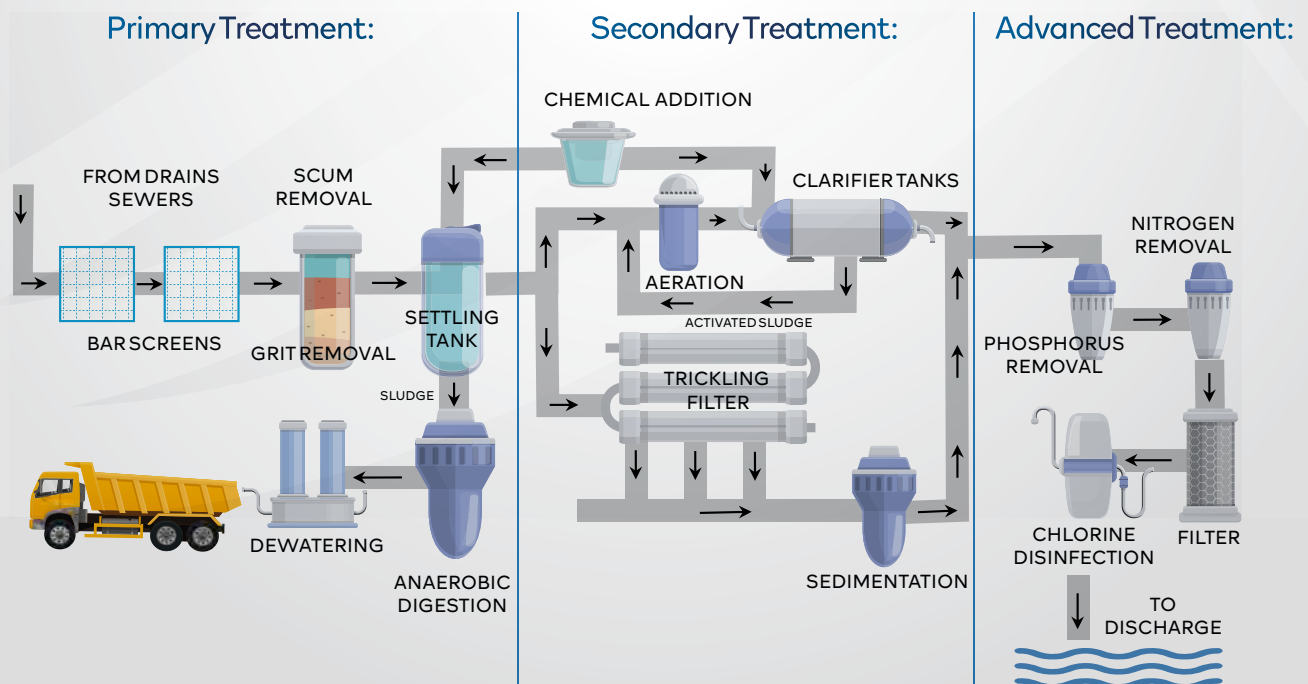
ALUCOR has the capabilities and experience in designing, manufacturing and constructing large, complex wastewater and sewage treatment plants.

**W**astewater, if properly treated, can be a potential source of water for several domestic and industrial activities. Improper treatment of wastewater or sewage poses severe threat to the environment and human health. This puts a premium on the importance of new technologies to treat industrial and domestic

wastewater and an experienced EPC partner to help implement these technologies.

With strong industry relationships, world class fabrication facilities and construction expertise, **ALUCOR** has the capabilities and experience to support the design, manufacturing and construction requirements of large and complex wastewater and sewage treatment plants.

**Our product and service offerings for Wastewater Treatment Projects span the complete project cycle as shown below:**





# Zero Liquid Discharge (ZLD).

In partnership with industry leading technology providers for Zero Liquid Discharge, ALUCOR can provide design, manufacture, construction, and maintenance solutions for the most complex ZLD projects in the region.

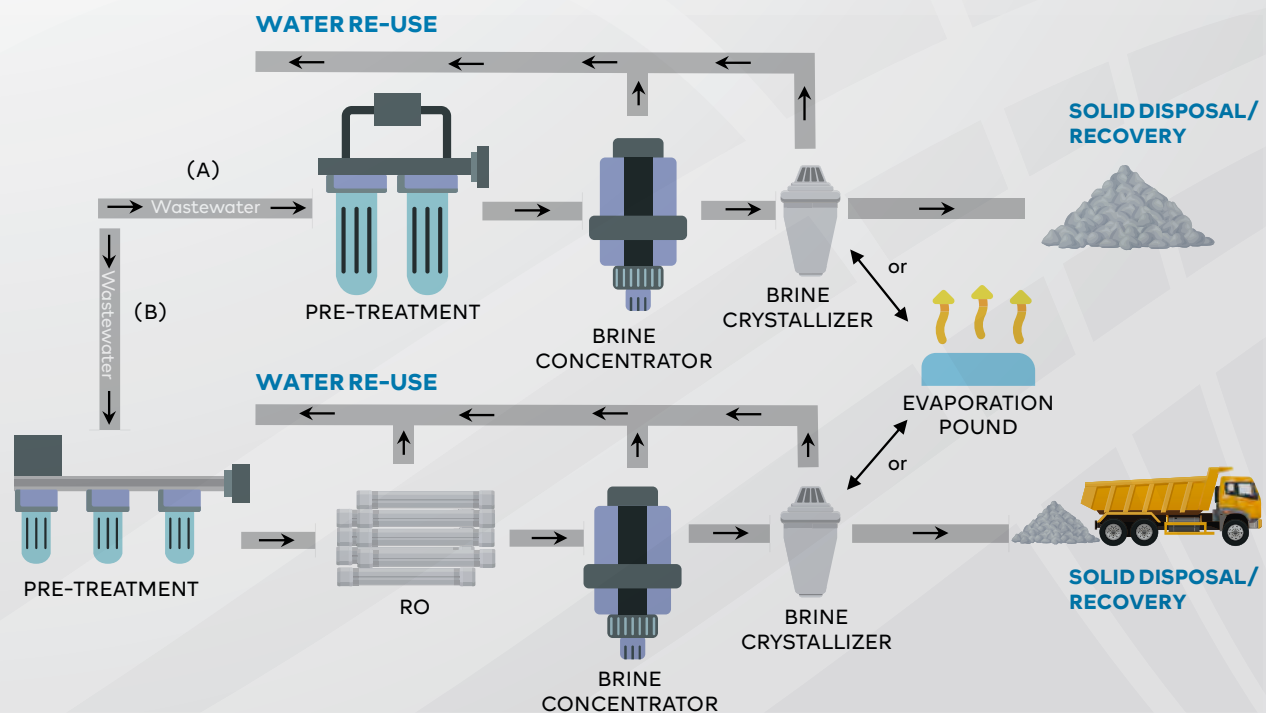
**Z**ero Liquid Discharge is a water treatment process in which all wastewater is purified and recycled; therefore, leaving zero discharge at the end of the treatment cycle.

Zero Liquid Discharge is an advanced wastewater treatment method that includes ultra filtration,

reverse osmosis, evaporation/crystallization, and fractional electrode ionization.

**ALUCOR** has the expertise to design and build wastewater reduction and ZLD facilities of any size & complexity. We also specialize in upgrade & maintenance services for existing industrial ZLD facilities.

**Our product and service offerings for Zero Liquid Discharge Projects span the complete project cycle as shown below:**





## Power.

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**ALUCOR brings decades of industry knowledge & execution expertise for complex projects in the Power sector.**

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**W**ith consumption of electricity increasingly growing every year, global electricity shortage is a hurdle to be confronted. Although

heavy on an investment front, power plants have considerably low running costs and high efficiency, which enables them to play an important role in global energy transformation.

At **ALUCOR**, we provide comprehensive services, that include manufacture, installation, upgrades and maintenance for power plants. Our broad-based capabilities, availability of skilled construction resources and equipment as well as our state-of-the-art manufacturing facilities allow us to be the perfect partner to execute complex power plant projects.

# Waste to Energy.

**Our knowledge and collaboration with industry leading technology providers underpin our strong position in the Waste to Energy market segment.**

**B**eing a technologically advanced means of waste disposal, waste to energy plants contribute to mitigating climate change. As an economical and ecological solution to divert waste from landfills, Waste to Energy plays a vital part of a strong and sustainable waste management chain.

Strong collaboration with industry leading technology providers and engineering companies, decades of manufacturing and construction

experience and detailed technical knowledge of the mechanical, electrical and civil aspects of Waste to Energy plants underpin our strong position in this market segment.

Our modular manufacturing and construction capability and use of advanced automated fabrication methods are ideally suited to optimize the high capital expenditure costs involved in the construction of safe, high-quality waste to energy projects.

## Our product and service offerings for Waste to Energy Plants include:

- Waste Feeding Systems
- Combustion Systems including Grate, Chute & Auxiliaries, Air Cooled Condenser (CCC)
- Boiler & Pressure Equipment
- Flue Gas Treatment Systems & Equipment
- Power Generation & Cooling Systems including Turbine Unit, Process Water Plant, Cooling Towers and Condensers
- Air Pollution Control Systems
- Residue Treatment Systems for Bottom Ash, Fly Ash and Effluent
- Energy Recovery System from Waste Gases and Flue Gases
- Turnkey Plant Construction including Civil, Mechanical, Electrical and Instrumentation works.
- Upgrade & Maintenance Services for existing Waste to Energy Plants







# Sludge Incineration.

**S**ewage sludge incineration with energy recovery is an environmentally safer way of sewage sludge utilization provided that point emissions to air, soil and water from this process are adequately controlled.

By partnering up with specialist technology providers, with state-of-the-art fabrication

facilities, unique modularization capabilities, and world class construction resources, **ALUCOR** has the expertise to offer the full range of services encompassing detailed engineering, procurement, manufacturing, delivery, construction, and maintenance services for all sludge incinerator plant requirements.

## Our product and service offerings for Sludge Incineration Plants include:

- Sludge Feeding Systems
- Combustion Systems including Grate, Chute & Auxiliaries, Air Cooled Condenser (CCC)
- Boiler & Pressure Equipment
- Flue Gas Treatment Systems & Equipment
- Power Generation & Cooling Systems including Turbine Unit, Process Water Plant, Cooling Towers and Condensers
- Air Pollution Control Systems
- Energy Recovery System from Waste, Gases and Flue Gases
- Turnkey Plant Construction including Civil, Mechanical, Electrical and Instrumentation works.
- Upgrade & Maintenance Services for existing Sludge Incinerator Plants



# Gas Turbine Power.

**T**he economics of power generation by gas turbines is proving to be more attractive, due to low capital cost, and high reliability and flexibility in operation. Quick starting and ability to use a wide variety of fuels from natural gas to residual oil or powdered coal are among other features of gas turbine power plants.

**ALUCOR's** world-class design, engineering and construction teams provide supply, fabrication, erection, optimization, upgrade and maintenance solutions for combined cycle power plants. Specifically, **ALUCOR's** specialist engineering partners carry decades of experience in developing customized solutions for optimization, de-bottlenecking and streamlining of existing combined cycle power plants.

## Our product and service offerings for Gas Fired Power Plants include:

- Combustion Systems
- Flue Gas Treatment Systems
- Energy Recovery Systems
- Conveying Systems and Associated Mechanical Equipment
- Heat Recovery Steam Generators (HRSG)
- Fuel Storage and Transmission Facilities
- Power Generation and Cooling Systems
- Mechanical and Rotary Equipment
- Turnkey Plant Construction including Civil, Mechanical, Electrical and Instrumentation works.
- Operational Plant Maintenance, Turnaround and Optimization works.





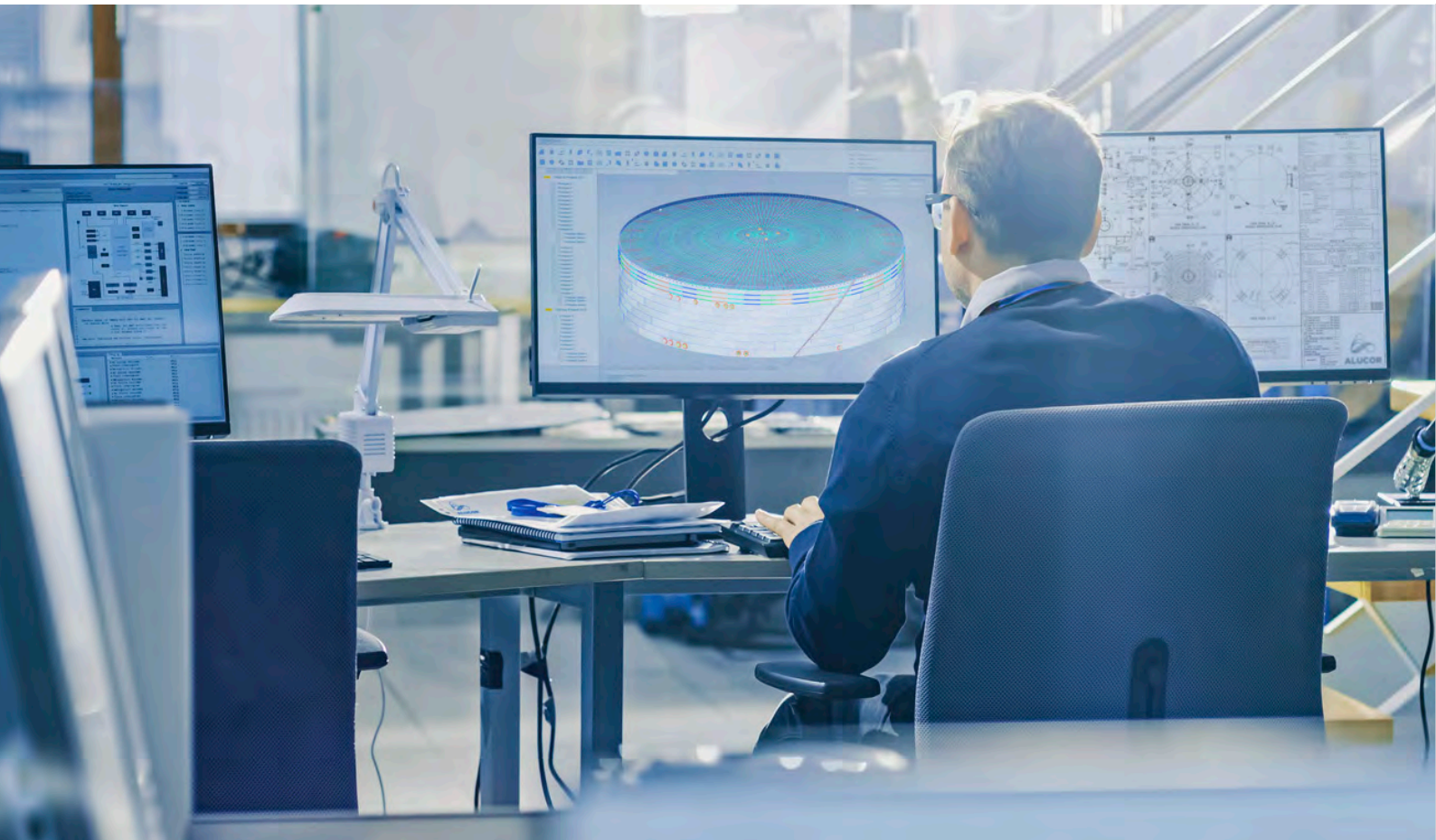
**WHAT WE DO.**

**Discover the **ALUCOR** advantage.**



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## Engineering.

**Our value-added engineering approach across structural, mechanical and electrical works, coupled with our powerful design technology, enables us to understand each customer's unique project requirements.**

**L**everaging solid long-standing partnerships with industry experts in the Water & Power sector and an accomplished in-house engineering team, ALUCOR provides detailed design & engineering services. Our value-added engineering approach across structural, mechanical and electrical works, coupled with

our powerful design technology, enables us to understand each customer's unique project requirements.

Through our knowledge, expertise, and partnerships with industry specialist technology providers, we offer clients a comprehensive design and engineering solutions specific to their needs.



# Procurement.

**With strong capabilities and relationships with suppliers around the world, our procurement teams have a wealth of experience in sourcing all types of materials required for Water & Power projects including:**

- Steel Plates, Pipes, Fittings and Profiles
- Non-metallic Pipes & Structures
- Static & Rotating Mechanical Equipment
- Electrical, Instrumentation and Automation Materials
- Civil Construction Materials





# Manufacturing.

**ALUCOR's world-class facilities and state-of-the-art fabrication equipment allow for fabrication assembly and testing of complex structures, piping and equipment.**

**W**ith over 75,000 square meters and 100 tons of overhead crane capacity at its facility in Jebel Ali, Dubai, and an additional 60,000 square meters of fabrication facilities with 205 meter long dedicated quayside (9 meter

draft) in Hamriyah Free Zone, **ALUCOR** is capable of manufacturing various equipment for the water & power sector. Additionally, our in-house state-of-the-art CNC precision machining workshop provides capability to cater to all machining requirements and allows us to provide complete solutions to our clients.



# Construction & Maintenance.

**We deploy the latest construction equipment and bring expertise drawn from our multinational workforce to guarantee delivery of all types of construction & maintenance services.**

**T**hrough innovative approaches undertaken by our in-house construction teams spread across the civil, mechanical and electrical disciplines, **ALUCOR** offers a comprehensive construction and maintenance solution – from the design, engineering and procurement phases to implementation, commissioning and handover.

By digitization of project management and construction processes, deployment of the latest construction equipment and the expertise drawn from our multinational workforce, we enhance our efficiency and productivity, to guarantee delivery of all types of construction services, while maintaining high standards of safety and quality.





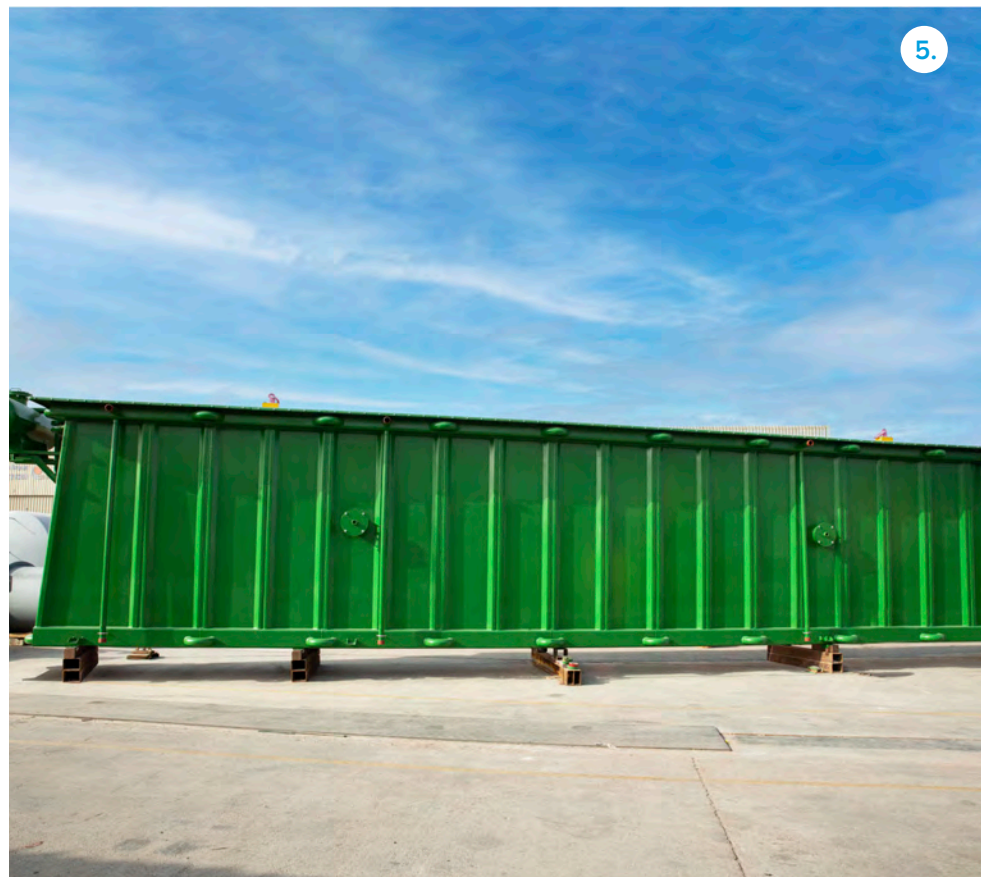
# Featured Power and Water projects.

1. Manufacture & Supply of Equipment, Mechanical Installation, and EPC Construction of Potable Water Tanks for 40MIGD SWRO Desalination Plan.
2. Manufacture & Supply of Equipment and Civil, Mechanical, and Electrical Construction Works for 150MIGD Independent Water Plant.
3. Energy Recovery and Capacity Upgrade Project for Palm Jumeirah SWRO Plant.
4. Pump modification and repair during plant shut-downs and emergency break-downs for power plant.
5. Supply and Manufacture of Mechanical Equipment for Al Warsan 200MW Waste to Energy Plant.





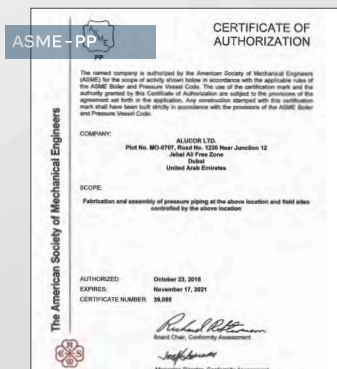
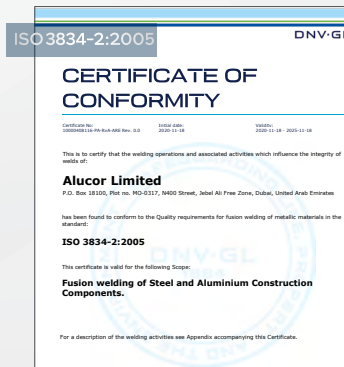
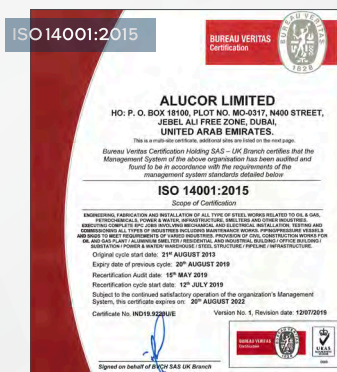
# | Project Experience |





## Our Certifications.

Through years of experience in executing fabrication projects, ALUCOR has developed and implemented efficient systems & procedures to maintain the highest standards of quality, safety, and project organization. As such, ALUCOR carries the following certifications:





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