"Revitalising" the world’s water resources
Although water covers approximately 75% of the world’s surface, only 0.01% of the world’s water can be used to cover the needs of humanity, according to the United Nations.
Utilising the most advanced proven technology, Boustead’s water and wastewater engineering capabilities revolve around “revitalising” the world’s water resources.

**Water & Wastewater Engineering Leadership**

Our company, Salcon, is the leading international water and wastewater engineering specialist from Asia outside of Japan. With over 25 years of experience, we have the distinction of being one of an exclusive group of Asian specialists outside of Japan to be a pre-qualified vendor to several of the world’s largest EPC firms. Having engineered numerous water and wastewater treatment solutions for industries with the strictest treatment requirements including semiconductors, power and oil & gas / petrochemicals, we are highly-qualified to “revitalise” the world’s water resources.

**Solving the Global Water Crunch**

With only 0.01% of the world’s water available to cover the requirements of six billion people, accessibility to clean water is a grave concern. Water resources have been further stressed by the world’s highly inefficient water usage record which shows that the world wastes half of the water it uses. At Salcon, we believe in playing a vital role in solving the global water crunch – through our “revitalising” solutions that produce clean water, increase water usage efficiency, and improve wastewater treatment and recycling processes.

**In-Depth Domain Expertise**

Since 1980, Salcon has designed and constructed more than 800 industrial and municipal water and wastewater treatment plants in 60 countries globally. Our strong international track record and in-depth domain expertise as a water and wastewater engineering specialist are unrivalled in the region.

**Total Quality**

Certified with ISO9001, ISO14001 and OHSAS18001, Salcon is a quality-oriented company that aims to make every partnership with our clients a “revitalising” experience.

**Turnkey Project Capabilities**

Salcon engineers turnkey water and wastewater treatment plants for the energy sector. Our client-centric approach encompasses:
After agriculture, industry is the second largest category consumer of water. About 20% of all water that is consumed is utilised in industrial processes such as chemical processing, manufacturing, power generation and refining.
**industrial water treatment**

For industrial clients, the impetus to enhance water quality for industrial processes and increase water usage efficiency goes beyond the standard “revitalisation” of water resources to include stringent requirements for high performance water treatment solutions.

**Salcon Understands the Requirements of Industrial Clients**

Salcon understands that the water treatment requirements of our industrial clients are the most stringent among all category consumers. High performance water treatment solutions translate into enhanced product quality and decreased processing costs. We help clients to achieve these important goals by delivering superior engineering that utilises the latest proven technological advancements.

**Delivering Superior Engineering**

Salcon’s team of qualified water treatment specialists has engineered water treatment solutions for all types of industrial processes including the sophisticated processing of raw water into feedwater for ultra supercritical boiler and the desalination of brackish water or seawater through reverse osmosis. It is our ability to identify, design and implement the optimal combination of process knowledge and technology within a tight project footprint and timeframe, that has earned us a reputation of delivering superior engineering. Our range of industrial water treatment technology includes:

- **Disinfection**
  - Chlorination
  - Ultraviolet sterilisation
  - Ozonation
- **Deionisation**
  - Softening
  - Conventional counter-current regeneration
  - Proprietary SALMIN counter-current regeneration
  - Licensed upflow counter-current regeneration
  - Condensate polishing
  - Electro-deionisation
- **Membrane**
  - Micro-filtration
  - Ultra-filtration
  - Nano-filtration
  - Reverse osmosis (including seawater desalination)
- **Degasification**
  - Membrane
  - Vacuum
  - Forced draft
In 2000, the water wasted by industry and domestic use amounted to 800 billion litres and 400 billion litres, respectively. By 2025, this amount is expected to rise by 20%.
Industrial wastewater contains high levels of chemicals, effluents and toxins which are extremely harmful to humans and the environment. Given its hazardous content, industrial wastewater requires conversion into a form that can be safely released into the environment or recycled and reused.

**Wastewater Treatment Applications**

For every purpose, Salcon has a variety of wastewater treatment solutions to meet the requirements of our clients. With a total commitment to removing contaminants such as nitrogen, phosphorous and carbon from wastewater, and treating all types of effluents, our applications cover:

- Pre-treatment of wastewater
- Treatment of industrial waste, municipal sewage and combined sewage
- Removal of solid particles, toxic waste and other hazardous materials
- Post-treatment of recycle and reuse water

**Types of Wastewater Treatment Technology**

Salcon’s wastewater treatment technology includes chemical-physical treatment systems, and biological aerobic and anaerobic systems, as shown below:
Today, one billion people have no access to clean drinking water. In two decades, two out of every three people will face this same predicament.
municipal water & wastewater treatment

For the general population, access to clean water is very much a necessity of daily life as water is utilised for agriculture and household activities.

Bringing Water to Communities
Salcon brings clean and safe drinking water to communities everywhere. “Revitalising” the world’s water resources is a priority that Salcon addresses, as we understand that an efficient, reliable and safe water supply underpins economic and social development in communities. We also engineer solutions for the proper treatment and disposal of municipal wastewater and sewage. Our dual objectives are to provide communities with access to clean and safe drinking water, while also ensuring that the resulting wastewater generated by these very same communities does not harm our very delicate ecosystems and is recycled for future generations to come. Our in-depth knowledge of municipal water and wastewater treatment has been applied to the design and construction of over 50 municipal water, wastewater and sewage treatment plants across Asia, Europe and Africa.

Municipal Water & Wastewater Treatment Technology
Our municipal water and wastewater treatment technology includes:

- **Water treatment**
  - Desalination
  - Mechanical screening
  - Clarification
  - Micro-filtration
  - Sand filtration
  - Post-chlorination

- **Wastewater treatment**
  - Chemical precipitation
  - Conventional activated sludge treatment
  - Extended aeration
  - Oxidation
  - Rotating biological contact
  - Sequential batch reaction

- **Sludge treatment**
  - Anaerobic digestion
  - Aerobic digestion
  - Thermal drying
  - Solid waste incineration

- **Wastewater recycling**
  - NEWater
delivering water & wastewater engineering globally

To date, Salcon has designed and constructed more than 800 industrial and municipal water and wastewater treatment plants globally.

Water for Every Need

Salcon’s expertise and experience traverse numerous industries. We have successfully “revitalised” the world’s water resources for processes in:

- Oil & Gas / Petrochemicals
- Power Generation
- Agro-Industry
- Electronics Manufacturing
- Semiconductor Manufacturing
- Chemicals Processing
- Food & Beverage
- Municipal
- Hotels & Resorts

CHINA
April Symbol (Pulp & Paper Mill)
Wastewater Recycling Plant

UNITED ARAB EMIRATES
Environment Agency-Abu Dhabi (Al Wathba TSE Treatment Plant)
New Water Recycling Plant
project showcase

“Revitalising” the world’s water resources

INDONESIA
Toshiba (Tanjung Jati B Power Station)
Seawater Desalination & Demineralisation Plants

OMAN
JGC Corporation (Sohar Refinery)
Seawater Desalination Plant

SINGAPORE
Senoko Energy (Senoko Power Station)
Boiler Water Demineralisation & Seawater Desalination Plants

SINGAPORE
PUB (Bedok NEWater Factory Phase II)
NEWater Plant
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