



Tianjin SDIC

China's Largest Thermal Desalination Plant

Overview

Capacity: 100,000 m³/day

Technology: Multi-Effect Distillation (MED)

Customer: SDIC Tianjin Electric
Generation Plant

Project Type: Engineering, Procurement,
Construction (EPC)

Location: Hangu, Tianjin, China

Commission Date: 2010

Footprint: 125 x 160 (mxm)

Differentiating Features

SIZE: The largest MED-based desalination plant in China, designed for an ultimate capacity of 400,000 m³/day.

TECHNOLOGY LEADERSHIP:

- **Waste Heat Utilization System** - the system is powered by waste heat generated by the Tianjin SDIC electricity plant, thereby reducing costs and minimizing the discharge of heat from the plant to the atmosphere.
- **Co-Creation of Table Salt** - using new technology, the system recycles its waste saline brine output for processing into table salt.
- **Closed Seawater Circulation Mode** - unique technology eliminates dependence on external fresh water resources.

Success Story

China's SDIC (State Development and Investment Corporation) Tianjin power plant is a state-of-the-art facility located 200 kilometers northeast of Beijing.

IDE's proposal for SDIC was a win-win concept: **the deployment of an advanced seawater desalination process that would be powered by the electric plant's waste heat**, which, unless captured and re-used, would be discharged into the atmosphere. The system installed includes four 25,000 m³/day MED units for the production of high-quality purified water. In addition, employing an innovative new technology, the system recycles the post-desalination waste brine and uses it to create pure table salt.

Mr. Guo Qigangang, General Manager of the Tianjin SDIC Jinneng Electric Power Plant, stated: "IDE's MED technology has enabled us to realize an environmentally-friendly power-seawater-desalination-salt production model. This helps us to minimize our environmental footprint while reducing our costs. We are proud of this world-class design and believe that it will serve as a model for other power plants throughout the world."

Why IDE

UNMATCHED EXPERIENCE: IDE has built 400 desalination plants in 40 countries. IDE dominates the global thermal desalination industry and has installed some of the world's largest MED plants. In APAC, IDE has installed 25 MED units with a total capacity of more than 300,000 m³/day.

LEADING TECHNOLOGY: Our proprietary technologies for both thermal and membrane (RO) desalination are recognized as the most advanced in the world. We are one of the desalination industry's foremost developers of MED technology and our solutions dominate the global market.



CUSTOMIZED APPROACH: We customize every element of our plants to assure optimal performance in local conditions.

ENGINEERING KNOW-HOW/PERFORMANCE:

We continue to set new desalination benchmarks in terms of capacity, throughput, efficiency and energy usage. This enables us to exceed design criteria and to deliver the industry's lowest cost per cubic meter of water.

PROJECT MANAGEMENT: We have carried out successful projects in all regions of the globe according to operating structures that fit the needs of our clients - whether turnkey, BOT or EPC. We are able to carry out all project phases, and are reliable partners in joint venture scenarios.

FINANCIAL CAPABILITIES: Our financing capacities help customers transform ambitious concepts into achievable facts on the ground.

About Us

IDE Technologies is a world leading desalination company. Since 1965, we have built 400 desalination plants throughout the world with a cumulative capacity of over 2,000,000 m³/day, including 25 MED desalination units with a capacity of more than 300,000 m³/day in the APAC region. Both our thermal distillation and SWRO desalination technologies are recognized as the most advanced in the world. IDE is jointly owned by two of Israel's largest industrial enterprises: ICL Group (50%), one of the world's leading fertilizer and specialty chemicals companies, and the Delek Group (50%), a leading international energy, real estate and financial services group.

