

Water Treatment and Reuse Industry in Tianjin



1. Basic information



The average person possession of fresh water in Tianjin is 160 m³, one fifth of the national average value



Water-saving Society being constructed in Tianjin

- Focusing on the comprehensive utilization of water resource
- Popularizing water-saving technology
- Water-saving with price lever
- Promulgating the regulations of water-saving



Water-saving Society being constructed in Tianjin

Luanhe River-Tianjin Diversion Project, Yellow River-Tianjin Diversion Project

Artificial Precipitation, water facility reconstruction

Promote the water-saving work integratively.





It is essential for Tianjin to develop water-saving. To take comprehensive measures, including adjusting structure of industrials and agricultural plantation, enhancing research of water-saving technology, carrying out Industrialization, taking full advantage of price leverage, promoting water-saving, improving utilization efficiency of water resources. It must play an exemplary role in the whole country to build Tianjin as water-saving City.

— Wen Jiabao





2. Progresses under proceeding

**“Opening the resource of
wastewater recycling and
seawater utilization;
Reducing the water
consumption of industrial
cooling and process;
Focusing on safety water
supply and irrigation-
ensuring technology”**



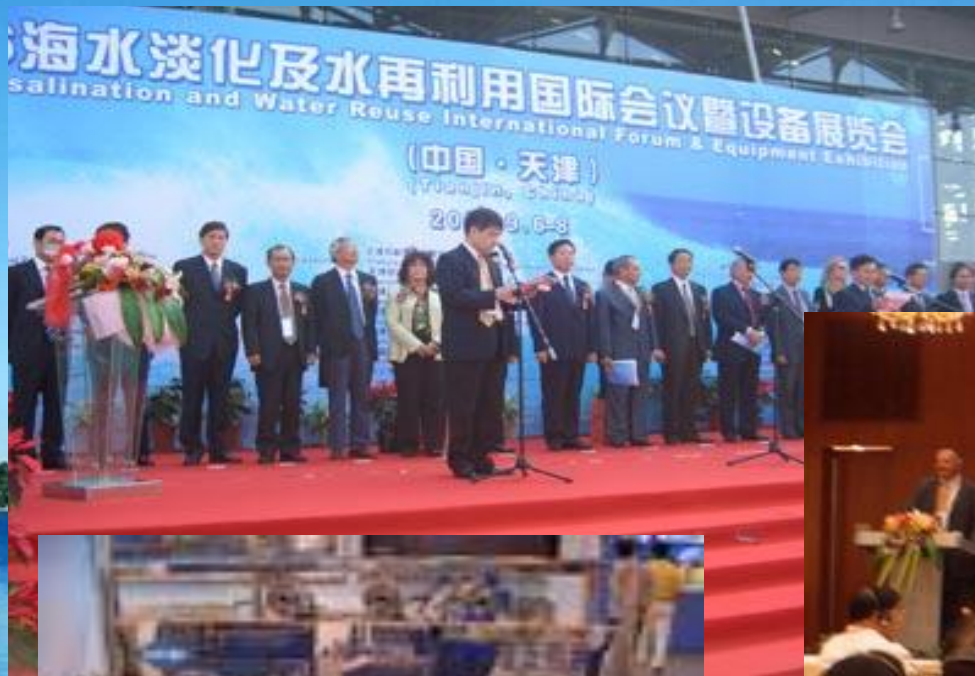
Forming a solid foundation for ecological city

At present, re-utilization ratio of industrial water reaches 93.2% in Tianjin. Ten thousand RMB of industrial increases value consumed **20m³**, only **13%** of the national average, which takes the first position in China; Output value of water-saving-typed industry reach **71%** of industrial gross output value in Tianjin, compared with **40%** water consumption

2,500 t/h industrial equipment of seawater recycling cooling built successfully, thousand-ton-level test base of seawater utilization, ten-thousand-ton-level demonstration projects of desalination with LTMED



**Desalination and Water Reuse International Forum
& Equipment Exhibition held successfully. The
platform of technology communications and
information exchange constructed, collaboration
memorandum signed.**





●National
engineering &
technology
research center

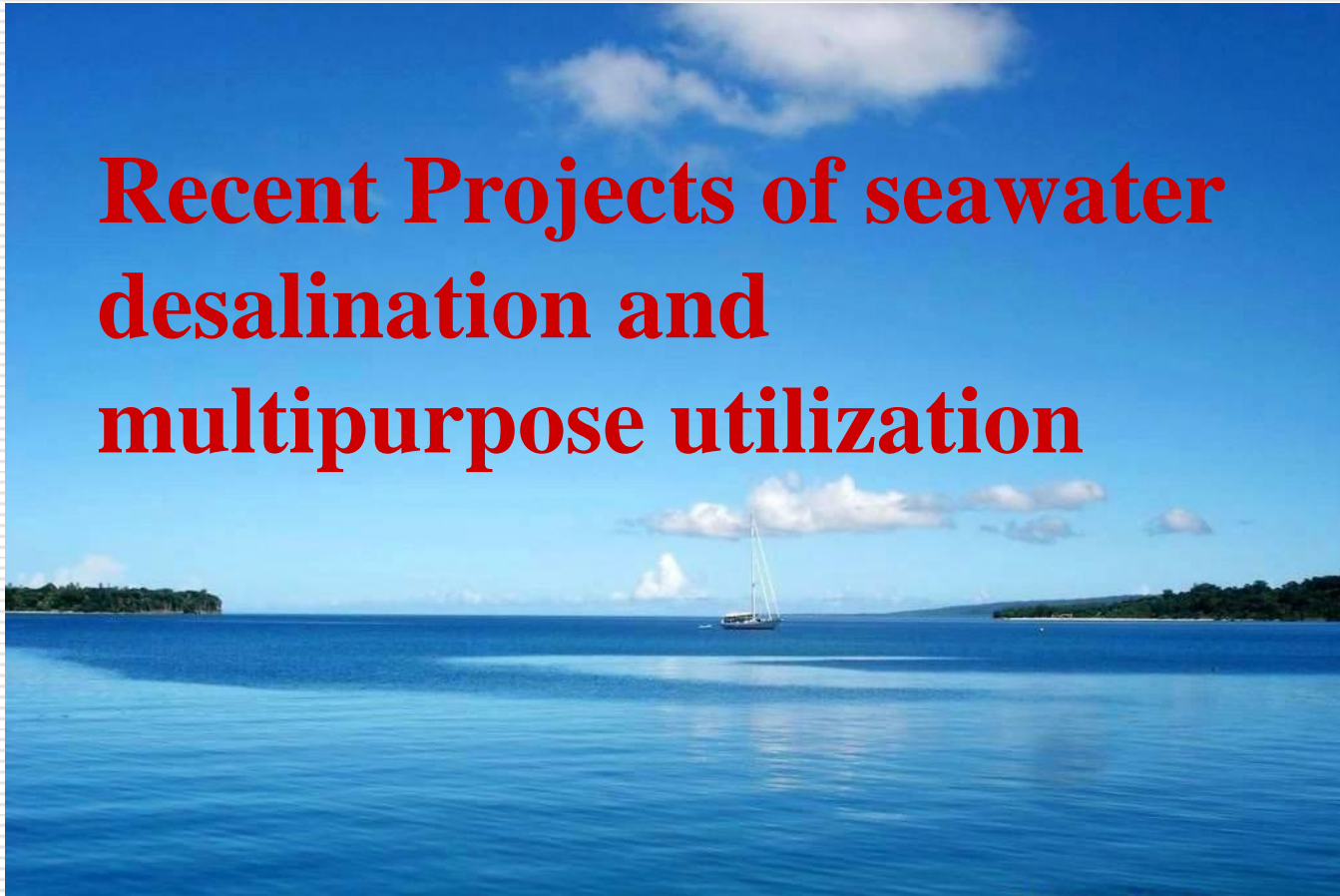


●Manufacturing
base of desalination
equipments

Tianjin plays an important role in R&D and application in national science and technology planning project of “Research and demonstration of desalination and multipurpose utilization in set facilities technology”

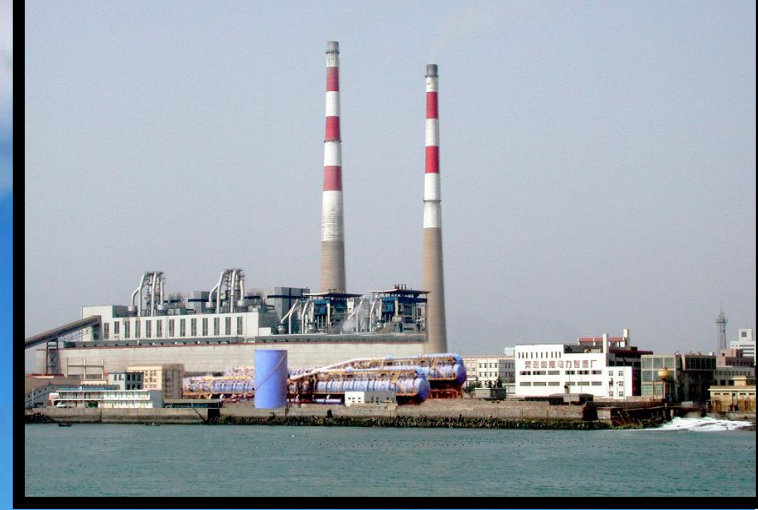


Recent Projects of seawater desalination and multipurpose utilization



➤ Tianjin SDIC Jinneng Electric Power Co.Ltd. , the first phase of the project: 2X1000MW power generation units and 200,000 t/d seawater desalination facilities; The total investment of the project: 12.4 billions RMB, the part for desalination: 2.5 billions RMB

➤ Desalination project in Dagang. The total investment of the project: 90 millions USD. The first phase of the project: 100 millions t/d, to be completed in July, 2009



Seawater desalination multipurpose utilization project at Tianjin Adjacent To Port Zone includes 500,000 tons of cooling water, 100,000 tons of the desalination capability, 850,000 t/y of salt-product and chemical resource extraction. The total investment: 12.4 billions RMB.

Baocheng Group. projects

The first phase of desalination project in Thailand will be 80,000 t/d, and is expected to be constructed in May, 2010.

Two sets of desalination facilities with 12,000 t/d for WABAG, Austria;

Desalination facilities for FISIA will be completed in March, 2009, Italy.



Wasterwater treatment and reutilization

● Numerous R&D and design institutes

- Two national engineering technology research centers
- Two national professional committees
- National wastewater treatment test bases



The capability of
wastewater treatment:
1.49millions t/d and
treatment ratio is 79.4%
The consumption of
recycling water: 50
millions t/y



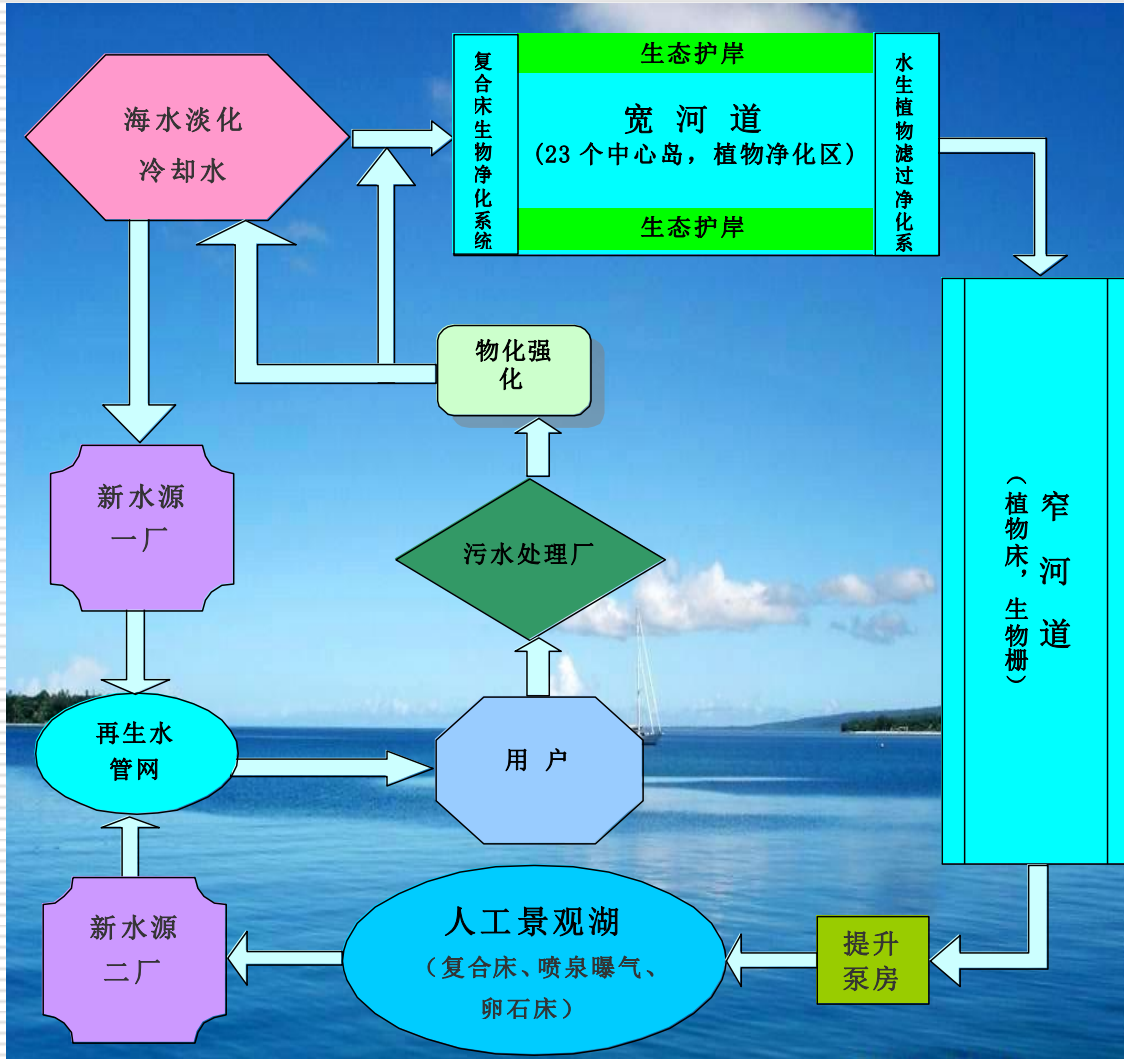
Safety of Drinking Water

Tianjin releases the water quality in China firstly, and all indexes are higher than national standards.



Water environmental improvement

Eco-ditchand landscape lake **created** harmonious water environment in TEDA



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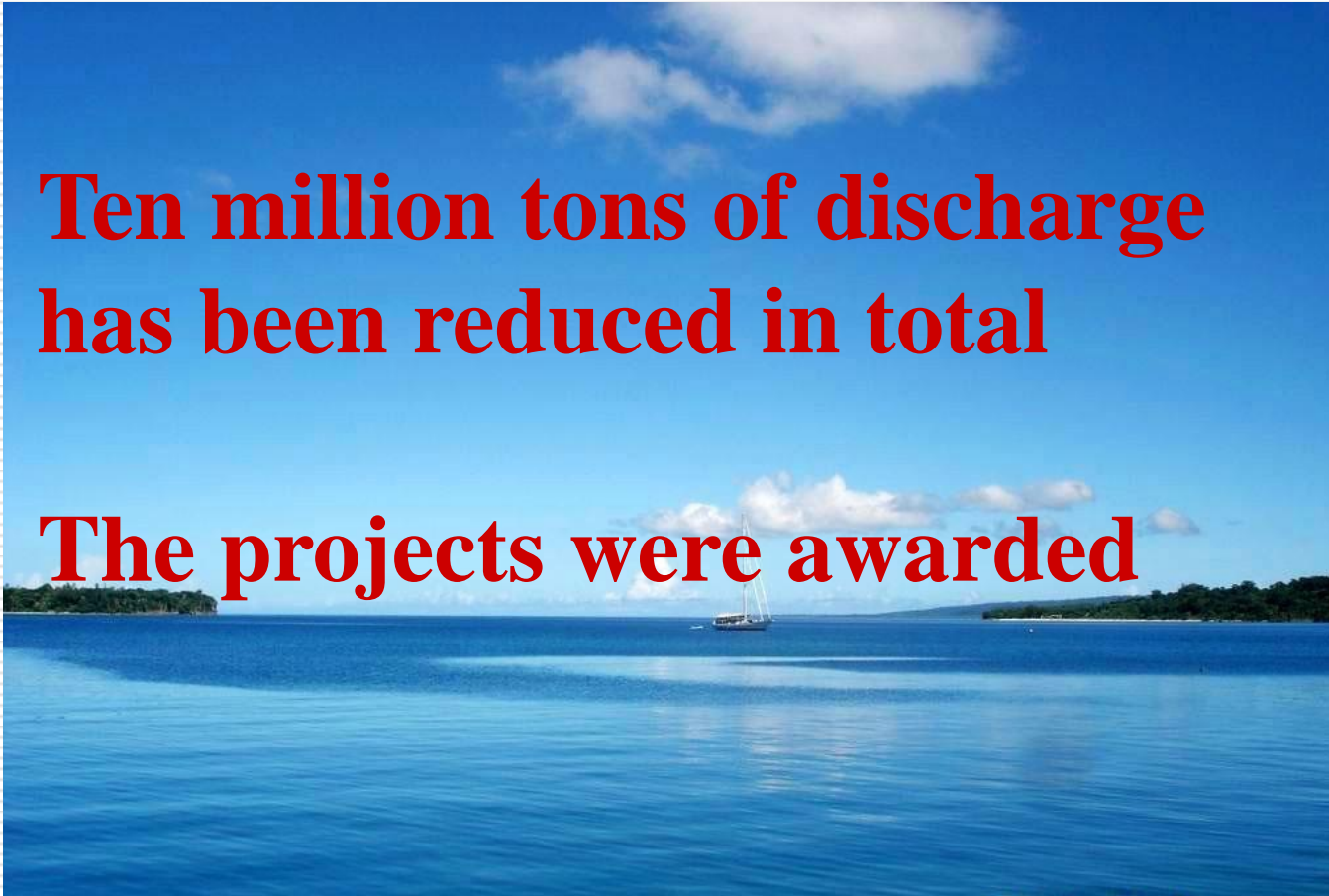
3. Demonstration Projects



Technical innovation projects with water-saving and emissions reduction in Tianjin Petrochemical Company

**Ten million tons of discharge
has been reduced in total**

The projects were awarded



Advanced technology research and project demonstration of water-saving and emissions reduction in Rongcheng Steel Group Ltd.

72,000 t/d wastewater treatment and reuse.

**Saving water 10,950,000 t/y,
emissions reduction of COD,
nitride and phosphorate of 10,000
tons, nearly sewage zero emissions
in enterprise**

Membrane Equipment & Test System

To construct the membrane equipment test & evaluation platform, to set up standards of membrane industry.

To manufacture sets of equipment and to apply in municipal, steel, petroleum and food industries and so on.

To reach the target of energy-saving by 20%, and COD emissions reduction of 90%.

Advanced technology research and demonstration project of deep removal process for nitrogen and phosphorus from municipal sewage

To build the demonstration plant of 400,000 t/d;

To reduce energy consumption by 15-20%;

To reduce COD by >40%;

To contribute for emissions reduction in Tianjin



Demonstration project of water environmental treatment in TEDA

**Reused water as only water
resource**

**Greatly improved the water
environment of salina**



4. Focuses of following works



➤ **Desalination and its multipurpose utilization technologies**

➤ **Multipurpose utilization technologies in Water resource**

➤ **Water environment improvement technologies**



Thanks !

