

COMMITTED
TOGETHER
TO WATER,
A SOURCE
OF LIFE

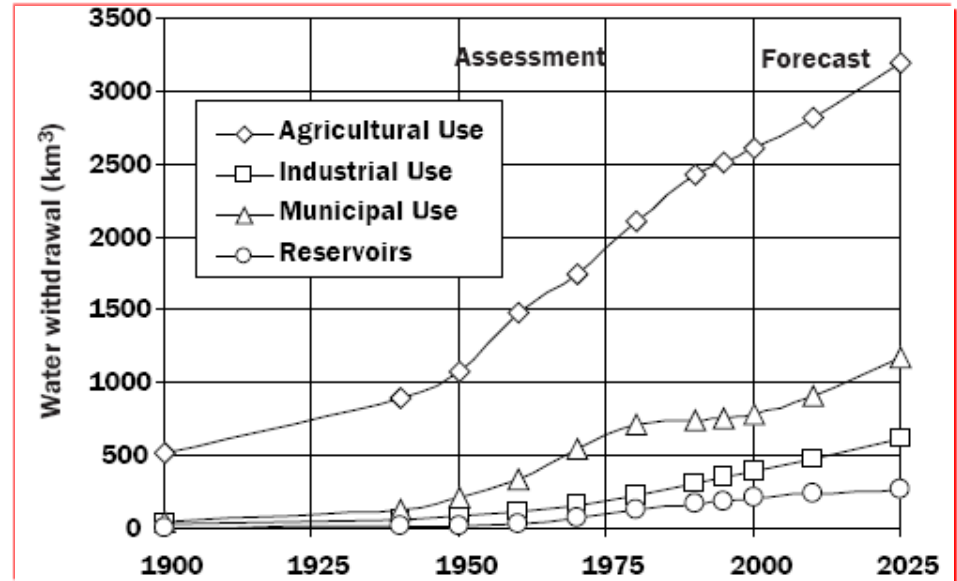


→ Current Challenges / Water Scarcity

当前面临的挑战/水资源短缺

- One of the most significant global challenges facing humanity this century.
- Water resource per capita in China is lower than worldwide average.
- Growth of per person demand (living standards, protein food)
- Industrial growth with demand for water.

Growth of world demand for water



→ Current Challenges / Safer water

当前面临的挑战/更严格的饮用水卫生标准

**Reinforced Drinking Water Sanitary Standard
GB 5749 -2006 has been brought into effect on July 1st, 2012**

In new standard, water quality parameters to be monitored are increased from 35 to 106.

新国标将水质监测参数从35项提高到106项。

In 2015,

- All provincial capitals should cover all 106 parameters
- Prefecture level cities should cover 42 parameters and some important parameters in their areas
- Counties should cover 42 parameters.



→ Current Challenges / Sustainable Development

当前面临的挑战/可持续发展/能效



Environment aspects

- Search for effective ways to reduce CO₂ emission
- Lack of fossil energy



Economical aspects

- Energy demand and price are growing fast



Regulatory aspects

- Water treatment performances always have to be improved
- Reducing the energy consumption as well as proposing higher performances for water



→ Degremont Solutions/Drinking Water Production Plants

得利满的解决方案/饮用水厂



**Guarantee water quality,
control costs and innovation**
可担保水质，控制成本，保持创新

- **Health issues:** bacteria control, treatment by-products, organoleptic quality
Economic issues: CAPEX and OPEX cost control
Environmental issues: preserving quality and quantity of water resources
- **Development of adapted solutions and innovative technologies** at each stage of the treatment **for greater efficiency**, automation and maximum reliability



3000 Drinking water production plants built by Degremont Worldwide!

已在世界各地建成**3000**多个饮用水厂

21.7 million people supplied with drinking water by our operations teams!

为**2170**万人提供饮用水

→ References / Drinking Water Production Plants

典型业绩 / 饮用水厂

Saint Cloud – France

100,000 m³/day



Joinville – France,

UV treatment,

300,000 m³/day



Mont Valerien – France

113,000 m³/d



Yangshupu – China,

360,000 m³/d



TianJin Jinbin – China,

500,000 m³/d

→ Degremont Solutions/Reverse Osmosis Desalination Plants

得利满的解决方案/反渗透海水淡化



Providing access to water with
minimal environmental impact
用对环境影响最小的方式获取水资源



Barcelone, Espagne (DBO)
Eau de mer OI – 200 000 m³/j

→ Pioneer of RO desalination:

- 250 plants built
- Over 2 million m³/d of desalinated water produced
- 2010 Global Water Award for the Desalination Company of the year

→ Development of **innovative technologies and services** to shorten delivery times, **reduce** operating costs and **environmental impact**

→ Solutions to optimise desalination performance:

- RO Membrane optimization and pretreatment efficiency
- Energy recovery and production systems
- Seawater intake and brine dispersion to protect marine flora and fauna

Over 250 Desalination plants built by Degremont Worldwide!

在世界各地已建成**250**多个海水淡化场脱盐水厂！

30 years of experience in design-build and 25 years of experiences in operation desalination plants!

在设计建造领域拥有**30**多年的经验，在运营领域拥有**25**年的经验！



→ References / Reverse Osmosis Desalination Plants

典型业绩 / 反渗透海水淡化厂

Barcelona – Spain,
200,000 m³/day



Melbourne – Australia,
450,000 m³/day



Wadi Ma'in – Jordan,
135,000 m³/day



Al Dur – Bahrain,
218,000 m³/day



Perth – Australia,
143,000 m³/day



→ Degremont Solutions/Wastewater Reuse / Indirect potable water uses 得利满的解决方案/污水回用/ 非直接饮用水



**Supporting development
whilst protecting people and
their environment**

支持发展的同时保护人类和环境

→ Challenges related to human and economic developments

- Urban growth and population density
- More stringent standards and regulations
- Economic context

→ Technological innovations and efficient design to fulfill complex and demanding specifications

- Smaller footprint
- Lower energy and chemicals consumption
- Preservation of natural environment (biodiversity) and protection of water resources



West Basin, CA – USA

215,000 m³/day
Reuse of wastewater for aquifer
recharge & other applications

Lusail – Qatar,

60,000 m³/day
Reuse of wastewater for aquifer
recharge

References

典型案例



→ Degremont Solutions/Energy Monitoring tools

得利满的解决方案/能源监测工具

AQUACALC

- **Management tool** dedicated to water operation
- Data centralization and **real-time access**
- **Energy consumption assessment**
- Allows the implementation of **ISO 50001** (energy management standard)
- Elaboration of **Key Performance Indicators**
- **Easy to run**



THANKS

