China Water Nexus

Uncovering China's Water Energy Nexus

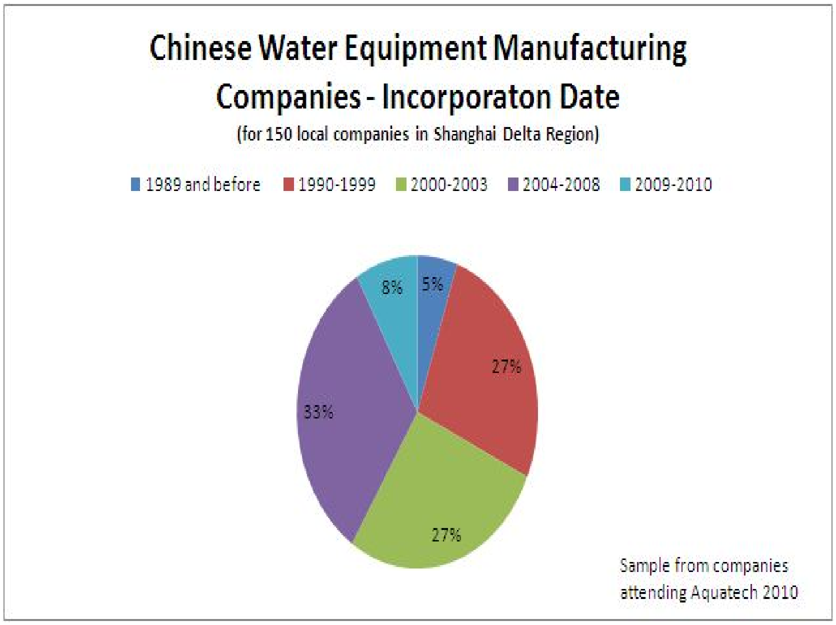
Water Equipment Manufacturing in China

China Water Nexus attended the Aquatech 2010 last week in Shanghai. The conference was by far one of the best attended water events this year .

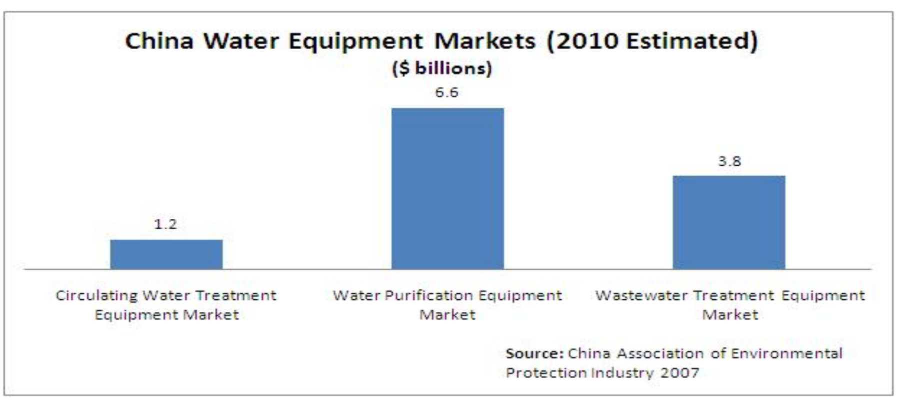
In looking at the exhibitor list, the majority of the companies were water equipment manufacturers. Although most of the foreign and multinational competitors were all present in the large booths in the center exhibit, we decided to check out the smaller domestic companies. Because the conference was in Shanghai, it was understandable that most of the exhibitors were from Shanghai, Hangzhou, Nanjing, Suzhou, Ningbo, and Wenzhou.

What we found interesting was that the small and medium businesses mainly focused in the water purification segment (central water purifiers, industrial pure water equipment, ultraviolet water purifiers, ozone generators, clean water tanks, and tank water treatment apparatus). This is understandable as the key markets for water purification are the pharmaceutical, chemical, food and beverage, food processing and electronics industries. These companies require these water technologies and therefore are 1) willing to make upfront purchases for the water equipment and 2) familiar with the B2B business model concept. Municipal sewage plants often support the BOT model (along with solid government relationships), and therefore traditionally work with larger companies with the capital to construct these facilities (see previous blog post for a list of water discharge companies).

In the analysis of these local companies, we found that the competition was fierce. Of the companies in the Shanghai/Jiangsu/Zhejiang area, of which were more than 150, many had similar products which they either exported or sold to the domestic market. In fact, many companies appeared quite interested in finding new export markets due to the over-saturation of the China markets. Other companies have begun migrating from industrial water purification to domestic water purification in hope of grasping new market share. China Water Nexus did a study of the incorporation date of about 150 companies based in Shanghai, Hanhzhou, Ningbo, Wuxi, Wenhzou and Nanjing. The goal was to better understand when these companies decided to make their investment into the water sector. As the graph depicts, 68% of all companies in attendance all chose to enter from 2000 and later (41% was 2004 and later).



Sowhat does this mean for foreign entrants? Obviously it means that the Chinese water market is not as easy as many newspaper articles make it seem. A more hands-on example is to consider the case of Duoyuan Water, a foreign listed water equipment supplier for the Chinese water industry. Because it is listed in New York, English speakers can read their recent prospectusto get a sense of the industry they operate in China (very helpful for identifying which products they sell in each industry). Duoyuan prides itself on being involved in three water equipment segments: water purification equipment, waste-water treatment equipment, and circulating water treatment equipment. Below is the market size in China according their prospectus (these figures do not include the service revenues which are also equally significant).



So how does Douyuan compete in a crowded field of domestic companies and a rich technology and brandname European companies? Competitive advantages in water manufacturing for the Chinese market can be looked at in two levels. For those that compete on quality (most foreign players), the importance of strong brand name access to capital, long operating histories, strong R&D capability, and good marketing resources are all important. For those that compete on cost or service (many domestic players), strong customer bases, access to government authorities, and strong industry bases are important.

Duoyuan appears to compete on cost but uses its scale and capital to ensure its service and quality is better than small local players. Costs in the water manufacturing business depend on the raw material price of steel, rubber, and plastic - all of which are on the rise (partly because of the huge demand from the Chinese domestic automobile industry). In its prospectus, Duoyuan believes its key differentiating factors are "1) lower material and component costs through the use of common components and materials within and across product categories (note – Duoyuan has about 90 products as compared to other companies which only have 10-15), (2) improve work-flow and quality control through the use of common manufacturing and assembly practices, and (3) lower production costs and dependency on key suppliers through the use of components manufactured in-house. "

Aside from cost, Duoyuan believes its domestic R&D capabilities will continue to be a driver for its business. Its R&D department has 148 members and has a working relationship with Tsinghua University's Chemistry Department (note: many companies always claim they have a working relationship with Tsinghua, but it remains to be see how this can help the company over a long period of time). More related to this blog, the company hopes to focus on energy saving products and is utilizing its research and development capabilities to develop products in this area. These include areas such as reusing sludge and other waste materials resulting from waste-water treatment processes.

Takeway: Because of the increasing cost in both raw materials and recently labor cost, one must wonder whether the water manufacturing industry in Cina is coming to a major turning point. Of the 150 domestic companies we saw at Aquatech, many were small to medium companies that were started in the past 10 years. Although they may have enjoyed a few good years of profit, the key question is whether the Chinese market will continue to support their products and at what price. Many of the companies in the Zhejiang, Jiangsu, and Shanghai areas were constructed there not only for the large domestic market but also the foreign market. The competition now is looking inward toward Sichuan, Chongqing, and other interior markets with large populations. Can these coastal companies continue or will new western companies take their place?

Tags: Duoyuan Water, New York