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**Emerging Trends  
in the Water Industry  
And  
One That  
Should Be . . .  
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**CLOSED FOR THE HOLIDAYS**



**Office & Shop  
Closing  
Reminder  
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A publication of American Structures, Inc. ~

**"Dedicated to being the trusted supplier of Bolted Stainless Steel Storage Tanks."**

## Water Industry Leadership . . . Lead, Follow, or Stand Aside

### Trends in the Water Industry and the Companies that Are Taking The Lead . . .

With global water consumption doubling every 20 years, its no surprise that the \$450 billion water market has seen rapid innovations.

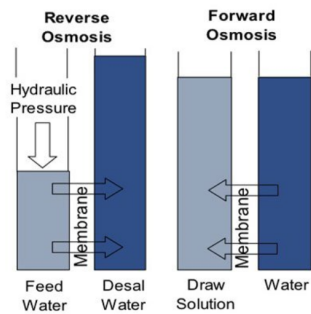
An increasing number of companies are turning to water reuse, desalinating water, and implementing new technology that makes its economical. The industry is also consolidating merging manufactures with service providers. And the trend is picking up around the world.

A new report by Citi Investment Research & Analysis has culled key trends to look for in the water market, and the companies levered to

the trends. **Advances in filtration membrane technologies have been displacing chemical treatment systems.** The membrane water treatment market is expected to grow from \$1.5 billion in 2009 to \$2.8 billion by 2020.



**Top companies:** Dow FilmTec, Pall, GE, Pentair, 3M, Koch, Siemens



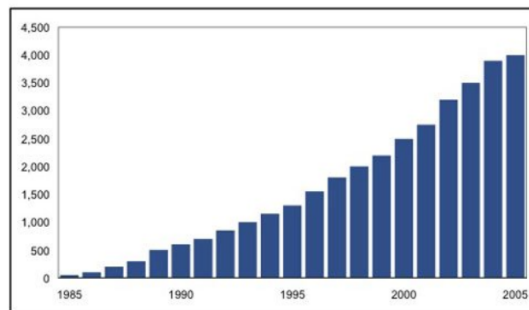
It's also a greener option and doesn't consume as much energy as reverse osmosis that relies on pressure from highly engineered pumps or turbo changes.

### Forward osmosis is the new form of desalinization.

Forward osmosis uses a semi-permeable membrane to separate water from dissolved solute and relies on natural pressure

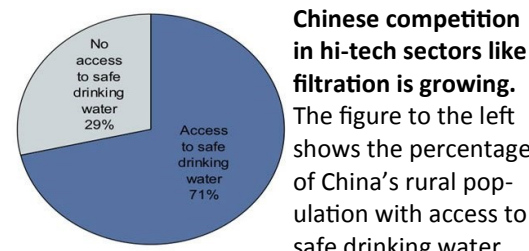
The question, however, is will the technology be scalable beyond the realm of science experiments.

**Top companies:** Hydration Technology Innovations, QuantumSphere, and Oasys Company



**Ultraviolet light disinfection is replacing chlorine.** 20% of North American wastewater treatment plants use UV technology. Ultraviolet light neuters parasites in water, but the effect only lasts as long as the water is passing through the UV light.

**Top companies:** Danaher, ITT and Calgon Carbon



### Chinese competition in hi-tech sectors like filtration is growing.

The figure to the left shows the percentage of China's rural population with access to safe drinking water.

There has been increased Chinese and Asian competition in the higher-end of water products and services. While the companies previously focused on low-end infrastructure products like pumps and valves, they are now venturing into sectors such as filtration. This boom is based from an attempt on behalf of the National People's Congress to increase the access of safe drinking water to China's rural population.

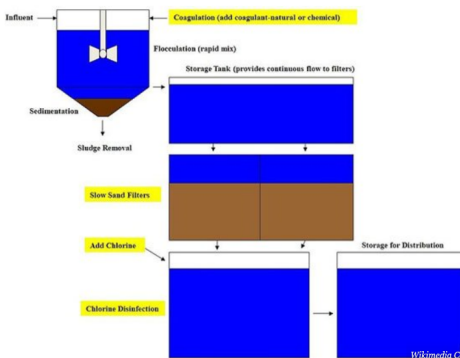
**Top companies:** Hyflux, Epure International, Shanghai Industrial, Beijing Capital, Kurita, Doo-san Heavy Construction, and Nitto Denko



There are increasing growth opportunities in water efficiency products. Water efficiency

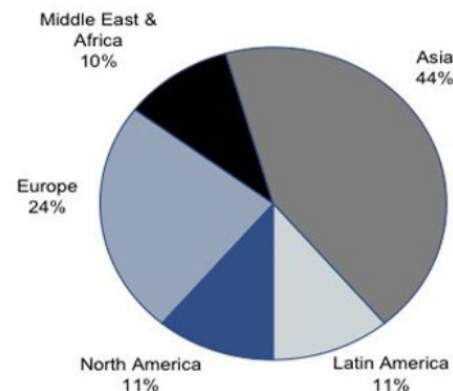
products include bio-gas recovery systems, water meters that could help companies gain from water footprint initiatives, ultrasonic sludge pre-treatment, pipe rehabilitation and relining systems, and water derivative products like water-free toilets.

**Top companies:** Badger Meter, Itron, Roper, Insituform, Geberit, Falcon Waterfree Technologies, and SPX



Point of use treatment is becoming more and more popular. A critique of municipal water systems is that once clean water gets contaminated as it travels through old pipes and is exposed to decaying water systems pipes and equipment. As aging systems aren't being replaced as quickly as they should, point of use treatment seems to be to the solution to that problem.

**Top companies:** Pentair, Culligan, 3M, Siemens, Eco-Water Systems, Kinetico,



The distinction between water service and equipment providers is blurring. The figure below, left, illustrates the estimated global population serviced by private water and wastewater operators by the end of 2015. The competition to land big water, waste-water, and desalination construction projects requires a bidding process on the basis of the build, operate, and transfer (BOT) arrangement. Now equipment manufacturers and service providers are partnering to build desalination plants or companies are branching into both segments.

**Top companies:** Veolia, Suez, Hyflux, and IDE

**Source:** <http://www.businessinsider.com/10-fascinating-trends-in-water-companies-poised-to-gain2011-5#membranes-are-displacing-chemicals-in-water-treatment-1>

## What SHOULD be an emerging trend in the Water Industry . . . STAINLESS STEEL.

With many technologies gaining prominence in the world of water, like those mentioned in the previous article, it is past time when the water storage industry needs to take note of the usage of **STAINLESS STEEL**.

**Stainless steel** is environmentally friendly, durable, resistant to corrosion, and affordable in comparison to its competitors. When one takes into effect its residual value, ability to be recycled, and low maintenance properties, **stainless steel** is the obvious choice when choosing a water storage tank material.

Furthermore, **stainless steel** does NOT require painting, is stain-resistant, and rust-free. With its high strength to weight ratio, stainless steel is impact-resistant and durable.

Stainless steel storage tanks can be welded or bolted. In the past, glass-fused-to-steel or welded water storage tanks have dominated the industry, but given stainless steel's superior properties, durability, and sustainability, combined with a lower labor cost rate, it is time for **bolted, stainless steel tanks** to become the water storage tank material of choice.

When combined with a bolted method of

fabrication and erection, bolted, stainless steel water storage tanks offer a plethora of benefits that its competitors are not able to match. Bolted, stainless steel tanks are versatile, enabling their owner's the ability to reduce or increase their size as their industry and needs demand. They can be engineered to design-build specifications and can be custom-built with future expansion needs in mind.

While no one tank design or material can meet every industry's requirements, taking into consideration the wide variety of beneficial attributes of both stainless steel and bolted tank design, it is obvious that combining the two factors result in the best return on investment (ROI). And in a world where resources are becoming more scarce and costly to attain, it only makes sense to choose a storage tank that can be recycled or repurposed when the time comes.

Taking all of the attributes of bolted, stainless steel water storage tanks into account, it is obvious they deliver the most bang for your buck. During a time when there is much talk about investing in America's aging water infrastructure, it seems obvious that bolted, stainless steel water storage tanks are a trend that should gain prominence in the field. Once you review the research, consider longevity over initial cost, and sustainability over short-term solutions, it is obvious that **bolted, stainless steel** storage tanks' time has come!



We remind you that the office and shop of American Structures, Inc. will be **CLOSED** at 12:00 NOON on December 24th and all day December 25th so that our employees may spend the holidays with their families. We wish all of our customers a friends a **VERY, Merry & Blessed Christmas. Happy Holidays!**