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Innovation has a name.

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"Nearly 120 years after Arthur O. Smith invented the pressed steel car frame, A. O. Smith employees are still hard at work, solving problems and developing new solutions for today's issues. Foremost among these is the issue of clean water, especially in emerging countries such as China and India."

In 1899, Arthur O. Smith designed a lightweight, cost-effective pressed steel car frame. The auto industry was in its infancy; however, Smith foresaw the need for a better car frame, which forms the "skeleton" of the vehicle. Within three years, the Smith design was the standard of the automotive industry.

Nearly 120 years after that initial breakthrough, A. O. Smith's employees are still hard at work, solving problems and developing new solutions for today's issues. Foremost among these is the issue of clean water, especially in emerging countries such as China and India. In 2010, company engineers in China and the United States developed a breakthrough in reverse osmosis (RO) residential water treatment technology. RO is the preferred form of water treatment in countries such as China that experience heavily polluted water sources. RO removes sediment and colloids, bacteria and other organics, heavy metals, salts, and viruses. Existing RO processes, while effective in delivering clean water, tend to create large volumes of waste water. The engineers developed an improved filter using what they called the sidestream membrane technology. This innovation increases fresh water output by 50 percent while substantially increasing the life expectancy of the filter and still effectively removing the impurities found in the local water. These products are making it possible for Chinese consumers to enjoy the benefits of clean water in their homes.

Since developing that breakthrough technology, A. O. Smith expanded its water treatment engineering capabilities. It now has test labs at its Corporate Technology Center in Milwaukee, WI, capable of replicating water conditions in any part of the world, giving its engineers the ability to evaluate the effectiveness of new filtration technologies. The company also is investigating sensor technologies as a way of increasing the effectiveness of its products and giving consumers a better understanding of the quality of their water. In 2015, A. O. Smith launched a line of RO residential water purifiers in India. Based on the sidestream membrane technology, these products are designed to appeal to the needs of consumers in that heavily populated country.

As recent events have demonstrated, there could be a need for enhanced water treatment technologies in mature markets affected by deteriorating infrastructure or drought-induced fresh water shortages. If that is the case, A. O. Smith's engineers will be ready to solve the next set of fresh water challenges.

Ajita G. Rajendra
Chairman and Chief Executive Officer