

Lone Survivor—A Story of the Innovation and Business of Water-on-Water RO Technology

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By Robert Slovak

Topper Manufacturing Founder R.W. Beall, Jr. (Mike) started his small business in Hermosa Beach, California, in 1953 as a plastic injection molder. Beall made battery filling bottles seen at the gas pumps throughout the Western hemisphere. He received several patents on this project followed by patents on a device that provides precisely proportioned mixed drinks. Over the next 40 years, Beall would be joined by his four children (Skip, Pam, Karen and Tim), a family of in-laws and hundreds of employees. The team, led by Beall, developed over 28 patents, as well as manufactured hundreds of products as a custom plastics molder for the Southern California beach communities.



Tim Beall

In 1974, Beall's son Tim was sent on a drive to pick up what would later become the very first patented water-on-water (WOW) RO drinking water system from the San Fernando Valley in California. Truman Tyler was the inventor, along with seven others that would become the owners of this groundbreaking technology. Soon after, Topper acquired rights to license, produce and market the WOW RO system. Even after years of continued development, though, WOW POU RO

systems had a difficult time penetrating the consumer water treatment marketplace. This was primarily due to the complex control valves, which had more than 50 parts.

In the 1990s, tragedy struck and three of the original four developers of the WOW technology, (Mike Beall, Truman Tyler and Robert Sprague), passed away. This left the younger Beall as the lone survivor to continue the development efforts of bringing this superior technology into reality. Beall continued developing his ideas from the knowledge gained over the years by being the company's go-to guy for diagnosing and resolving problems. He was now the reigning world expert on WOW technology. Beall then engaged John Sprague (son of Robert Sprague) and Mr. Yoshinori Kato (an investor from Japan) to finish their fathers' development. He also brought in industry heavy-weights Robert and Jack Slovak, founders of the Water Factory Systems, and Michael T. Baird of today's TST Water. Additional talent included R&D experts Ruben and Obed Valentine, two brothers with lifetime expertise in plastics, Jay Julos, former Water Factory R&D specialist and Mike Manes, an expert machinist.



Countertop system

Starting over

The new team set out to develop a product utilizing the water-on-water technology. They were successful at reducing the original WOW system's 50-plus parts to one, having a smart valve with only one moving part. (This smart valve has a unique synergy with the storage tank: they only function when interconnected and that's when the magic begins.)

The reinvented and highly patented WOW technology achieved a new level of performance, efficiency, flexibility and reliability.

The newly formed company, named Next-RO, had one major setback: it received funding from a lender that turned out to be less than cooperative. What was originally thought to be a great deal turned into a nightmare. During the downturn of 2008, the Next-RO company would suffer until its eventual forfeiture of assets through a *Chapter 11* filing in 2011-2013.



Parallel processor

After the completion of *Chapter 11*, the corporation stayed intact; however, all the assets were gone and the 58 investors realized there would be no return on their investments.

Beall, by exercising tax-loss-carry-forwards, attempted to regain the assets but found out most had been already sold to an auction-house. In an exceptional display of negotiating, friendship and luck, he single-handedly acquired all the production machinery and tooling of the former Next-RO company from the auction house. It wasn't long before he was successful at raising additional funds to retrieve his life's work from the creditor: the priceless patents. It would be another 17 months of paying patent maintenance fees worldwide before Beall would find the right financial partner.

Taking another shot at the future

At the 2015 WQA convention, Beall was walking the floor with Paul Trafas of Aqua Future, engaging in several licensing discussions for the WOW technology. Beall was introduced by a close industry friend to a successful businessman from China, who owns one of the world's largest solar companies. After their team reviewed the WOW technology and found it to be highly advantageous, they wanted in. Beall met with the prospective investors in China and within days, had a strategic partner that would enable restarting the WOW project. The first question was "What do we do with the Next-RO name?"

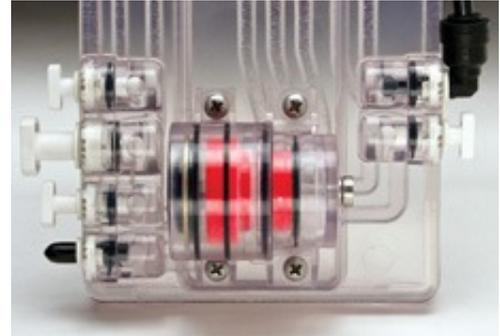
Tarnished with a past and possible hidden liability, the name had to go. Beall decided to go back to WOW technology's roots and call it Topper as it originally started out decades ago. The assets that were personally acquired by him were put into the Topper company. The original investors lost nothing but time; they have ridden Beall's path of success and the alliance between Topper and China was completed.



Battery filler



Tank



Smart valve

Topper manufactures only in America but remains in the technology licensing mode, starting with a successful and exclusive license with China for manufacturing and marketing within that country. China built an amazing facility for the project, consisting of 800,000 square feet of manufacturing, including new state-of-the-art molding equipment and three labs. The Chinese partners also have a customer base of 3.1 million active distributors and clients. Beall recently returned from the WOW product launch of two new brands for the Chinese market only. In just the first hour, Topper's partner sold the equivalent of \$8 million USD. WOW is for real.

With the re-emergence of Topper, Beall has the pleasure of bringing back a few of its former team members, including Ruben Valentine, Mike Manes, Joe Funk and Robert Slovak as a technical advisor. Beall is also thinking out of the box by recruiting professionals from outside the water industry. Don Roy, currently VP of Sales & Marketing, has vast experience in patents and licensing as well as working with large OEMs, primarily in the semi-conductor and electronics industry. Don Ogan, VP of Wholesale Business Development and formerly President of Aroma Housewares Inc., has over 20 years of countertop kitchen appliance experience.

Topper is currently operating within a 14,000-square-foot US facility, capable of assembling 400 'Made in America' systems per shift, along with off-site plastic molding in Anaheim, CA.

The water-on-water technology is currently being sold in a variety of market channels, including POU countertop and undersink drinking water, office water coolers, coffee service, food service, RVs and boats, but is not limited to only these markets. The systems can also be found at select Ferguson's plumbing showrooms, RV centers across the US and soon, behind the counters at coffee shops, restaurants and fast-food outlets.

Don't be surprised if you see a Topper WOW RO system on a TV infomercial. Until then, you are invited to visit Beall and his new team at the WQA Convention & Exposition this March, in Booth 633.

Conclusion

The WOW project has finally evolved into what Beall and his father dreamed of many years ago. When the patents expire, the WOW technology could very well be 'the lone survivor' over traditional air captive systems, owing to its superior line-up of features. The team is now back at the drawing board and in the lab, creating the next groundbreaking innovations in water technology.



About the author

Robert Slovak is a degreed Mechanical, Aeronautical and Astronautical Engineer best known as the co-founder of Water Factory Systems in the early 1970s, one of the original developers of the applications of RO technology. Officially retiring from the water industry in 1996 after the sale of his company, he went on to bring his water knowledge and experience to Brazil and other international markets. During this period, Slovak maintained his presence in the American water industry as a consultant and regular speaker at water conferences and exhibitions. Since 2006, he has focused on providing seminars on water quality and technology to the health practitioner sector. Slovak currently works with Next Filtration Technologies and Topper Manufacturing Company.

About the company

Topper Manufacturing Company is privately held and headquartered in new facilities in Torrance, CA. It's highly successful water-on-water RO platform (the WOW engine) allows it to be extremely versatile in home, office and food service POU drinking water applications. The WOW engine even solves one of the most challenging POU applications—multiple coffee brewers—with the ability to interconnect systems and adjust the RO TDS. For RVs, the WOW engine only requires 20 psi to produce water. And, with its ability to fit into most water coolers, the WOW engine is aptly nicknamed 'the little engine that could'. Topper Manufacturing Company is proud to display 'Made in America' for all of its fine products.