

# Pool & Spa Corner

Welcome to another installment of the Pool & Spa Corner! The goal of this column is to reach out to those with a stake in the pool and spa industry so that our readers can benefit from our perspectives. Let's jump in!



**Tom Norman**, ASA member and Chair of ASA's Pool and Spa Committee, is a Product Manager for Airplaco Equipment Company and Gunitite Supply & Equipment, two divisions of Mesa Industries. For over a decade, he has represented the company's Northeastern region based in Cincinnati, OH. Airplaco and Gunitite's shotcrete equipment, including dry-mix gunitite machines, batch plants, and shotcrete pumps, is manufactured at this northeast location and also distributed through Houston, TX, and Monrovia, CA, sales locations. Norman is involved in product development for Airplaco's line of shotcrete equipment, which has been produced since 1946. He served 6 years in the U.S. Army and earned an associate's degree in business from the University of Wisconsin, Milwaukee, WI. Norman is also a member of the International Concrete Repair Institute (ICRI) and the Association of Pool and Spa Professionals (APSP).

## Welcome to the Beede Center

by Robert Guarino

**T**he Beede Center is located in Concord, MA. This state-of-the-art swimming facility was constructed by Thoughtforms Corporation of Concord, MA; the swimming pools were designed by Northeast Aquatic Design of Peabody, MA, and were built by South Shore Gunitite Pool & Spa, Inc., of Chelmsford, MA.

Many challenges were presented by this project:

- The water for this project needed to be contained and filtered for over 400,000 gal. (1,514,000 L);
- The combined surface was over 7500 ft<sup>2</sup> (697 m<sup>2</sup>);
- The diving pool ranged from 8 ft (2.4 m) deep in the shallowest end to over 13 ft (4 m) deep at the diving end;

- The diving pool walls needed to be 16 in. (406 mm) thick with two layers of No. 6 Grade 60 reinforcing bar;
- The diving pool cove (intersection of wall and floor) thickness needed to exceed 24 in. (610 mm);
- The filtration process had to be accomplished by using filters the size of small residential pools;
- Polyvinyl chloride (PVC) piping, which ranged in size from 2 to 14 in. (51 to 356 mm), had to be carried into the pool by up to four men at a time; and
- Rebound had to be removed from a pool excavation 15 ft (4.6 m) deep without the use of machines or heavy equipment.

All of the pools were built using gunitite (dry-mix applied shotcrete) and installed by the ACI certified nozzlemen employed by South Shore Gunitite Pool & Spa, Inc. Our gunitite application process consisted of the following:

- Two Ingersol Rand 850 CFM air compressors;
- Two Airplaco mobile mixers;
- Two Airplaco C-10 Ridley cement guns;
- Two booster pumps;
- One 500 gal. (1892 L) water storage tank;
- One 3 yd<sup>3</sup> (3 m<sup>3</sup>) John Deere loader;
- One 30 ton (27 metric ton) bulk cement hauler; and
- Fourteen South Shore Gunitite Pool & Spa, Inc., employees, four of whom are ACI certified nozzlemen.

To make headway in a project of this size, we continuously operated two guns and had both our crews there at all times. We had to use our most



*Beginning of application process for the swimming pools*

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*Dry-mix shotcrete application by an ACI certified nozzleman*



*The 8 to 13 ft (2.4 to 4 m) deep pool with two 3 ft (0.9 m) diving stations and one 10 ft (3 m) diving station*



*Awaiting next application in shotcrete process*



*A 25 x 25 yd (23 x 23 m) competition pool with a depth range from 4 to 7 ft (1.2 to 2.1 m)*

experienced personnel to shoot the dive pool walls because of the double layers of steel and the 16 in. (406 mm) thickness. It took care and patience to shoot and provide good coverage to the rear steel without compromising the coverage of the steel on the face. Proper nozzle technique, blow pipes, and cleaners with brooms and trowels helped keep the rebound from accumulating on areas that were next in progression to be shot. In addition, we were working under a roof in the middle of summer, with temperatures usually above 90 °F (32 °C), so we had to be constantly applying a fine mist of water to keep the shotcrete cool, yet not enough to damage the finish.

This facility stands as a monument to what can be accomplished with the use of highly skilled and properly trained certified nozzlemen. Gunite, unlike standard plain concrete, will not achieve its design strength just by being placed on the ground. The nozzleman is the controlling factor in its application.

When South Shore Gunite Pool & Spa, Inc., was selected to build these pools, we considered different types of possible pool structures. We

looked at cast-in-place concrete and PVC-applied stainless steel panel systems. In the end, gunite was chosen for a variety of reasons. First and foremost, the use of gunite was the most economical solution and allowed a faster installation time than poured concrete. Also, gunite provided superior strength to PVC panels at a greater depth, which allowed the crew to meet project requirements.



**Robert Guarino** has been in the pool industry for the last 30 years, 20 of which he has served as the President/Owner of South Shore Gunite Pool & Spa, Inc., with strongholds in both the residential and commercial sectors. He is an ACI Certified Nozzelman and a member of The National Plasterers Council, The Better Business Bureau, and the American Shotcrete Association.