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# DEALER DIALOGUE

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ODD ZONE

## Sharks, Stingrays, and Pressure Washers – Oh, My!

ROYCE INDUSTRIES  
Las Vegas, Nevada

**R**oyce Industries, Las Vegas and The Shark Reef at Mandalay Bay have teamed up to solve a host of cleaning needs. There's nothing fishy about the fact that the aquarium must be kept in pristine condition to accommodate the daily influx of slot-weary visitors who have made this one of the city's top non-gaming attractions.

Every day, a team of divers armed with Landa PE4-3000 pressure washers submerges themselves into North America's only predator-based aquarium and exhibit, known as The Shark Reef. This 1.6-million gallon seawater exhibit, home to more than 2000 denizens of the deep, requires daily cleaning, and the Landa equipment is perfectly suited to the tough task of keeping the reef and underwater displays free of algae and grime. The PE units are mounted on custom built carts and a track system in order to accommodate the stringent safety requirements. Why the PE? The PE has a great track record, runs quietly, and with next to zero vibration it is the perfect unit to take on a project of this size.

Project consultant R. Calvin Rasmussen had a great time working with the zoologist, divers and safety staff to solve a variety of cleaning needs. One of his favorite challenges:



*The Shark Reef at Mandalay Bay in Las Vegas, Nevada is a 1.6-million gallon seawater exhibit and home to more than 2000 denizens of the deep.*

most of the cleaning had to be done while the displays were closed, making it difficult to keep up with their cleaning needs. While visiting the site for a routine visit, Calvin suggested they clean while the displays were open and incorporate the equipment into an educational part of the exhibit. The aquarium staff was reluctant to do so, worried that guests would be distracted by the yellow carted pressure washers, which are situated on a catwalk three feet above the high water mark and visible to those trying to immerse themselves in this underwater world.

**“Every day, a team of divers armed with Landa PE4-3000 pressure washers submerges themselves into [the] predator-based aquarium...”**

Calvin's solution? To make the pressure washers invisible to the naked eye. This was accomplished by configuring a series of nozzles, attached to four Landa PE4-2000 pressure washers, and positioning them along the perimeter of the display's water surface. High-pressure water was then directed across the surface of the exhibit, disturbing the water just enough to mask all the action taking place on the catwalk above, an ingenious yet simple idea made possible by the experienced team at Royce Industries. “The best part of this project,” Calvin says, “is the enormous need for replacement stainless steel parts and hoses.”

If you have a chance to visit this \$60 million experience, look closely, for among the sharks, saw fish, stingrays and sea turtles you may see a diver armed with a pressure washer's wand and gun feverishly keeping himself alive, and the vibrant colors of the display clean.