ask The Owners' Circle

What is "Pro-Ride" technology, and how was it used on Santa Anita's track surface this winter?

Ian Pearse, Director, Pro-Ride Racing International

Following the drainage failure of Santa Anita's Cushion Track this winter, track management explored several possible fixes, including replacement of the entire surface. In the end, management deemed a solution offered by Pro-Ride Racing – developed by Ian Pearse of Australia – its best option. Shortly after Pro-Ride finished the interim repair work, Owners' Circle interviewed Pearse, who agreed to explain the technology and repair process for our readers.

"Ron Charles [of Santa Anita] sent us a sample [of the Cushion Track], just after Christmas, to see what we could do, because the material on the track was not draining and there was no cushion," said Pearse. "I tested it in our lab in Australia, treated it with our binders and fiber, and realized that it could be fixed…. So, after speaking with Ron, I got on a plane, came here, and spent time at the USC lab of Dr. Jean-Pierre Bardet. We tested it for cohesion and for drainage. We used his lab to do all the tests as to how much water we could pass through it, and what kind of cushion we could create. Then we organized all the necessary materials, and put them in!"

The first step, according to Pearse, was the addition of a binder in liquid form. Although the binder originally used on the existing Cushion Track was a wax, Pro-Ride uses a different, polymetric binder. "We had wax tracks in Australia eight to 12 years ago," explained Pearse. "However, the tracks in Australia need to withstand great extremes of cold and heat.

"We found wax starts to degrade, it melts off the sand granules, and it wasn't good enough for Australian conditions. That's when I developed the first liquid polymetric binders. It's a completely different thing altogether," explained Pearse. "It's all about the molecular structure of the binder. It's multi chained, so you can make it like putty, whereas with waxes you can't do that. It retains its properties better than any waxes."

The first step in the repair at Santa Anita was to add the liquid polymetric binder, followed by some fibers and a small percentage of ground rubber. The binder was applied in a cold emulsion with water, and the track surface was mixed so that the sand granules all got coated. The water evaporated, leaving the elastic binder coating the sand particles.

"The track had a very high silt content," said Pearse. "We basically bound all that silt together. It is bound in little clumps of silt. That's what makes it possible for the water to pass through. Before, the track would get packed very hard, and they would have to do a lot of maintenance to create the cushion. What we've done is been able to reduce the maintenance and allow the track not to pack."

Pearse, who founded Pro-Ride Racing in 1989, designed the polymer specifically for use on synthetic racetracks, not as an adapted use from any other industry. He received funding from the Australian government to formulate these synthetic binders for racetracks. "In Australia, it was all because of water – we don't have the water," said Pearse. "Being a smaller company at that time, the government paid for us to set up a lab at Monash University." Pro-Ride now has laboratories in Australia and Germany, and is in the process of setting up a third lab, at USC.

As far as the composition of Santa Anita's racing surface now, Pearse said, "It's probably about a 70% Pro-Ride. It's got our binder and fiber in it. If we were building it from scratch, we wouldn't use the same sand type. There are things we would do different; but our job here was to make it drain, give it some cushion."