



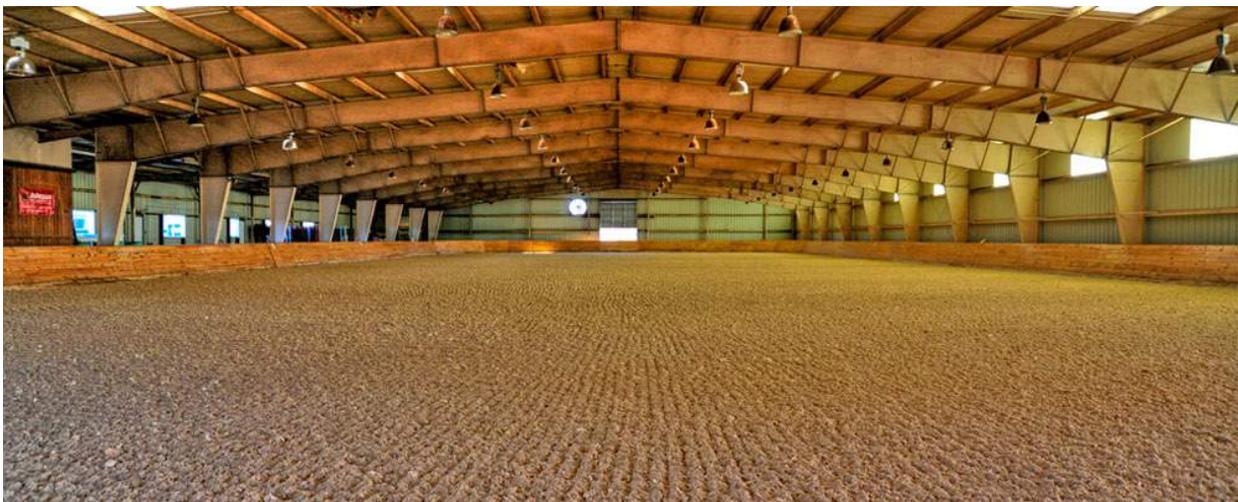
[December 2015](#)

Attwood Equestrian Surfaces, Inc

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What makes Pinnacle Special



The polymer coating on Pinnacle components gives the footing viscoelastic properties. This is a technical term scientists ascribe to materials that 'give' or move with some resistance in response to a force (visco), but recover or are stretchy somewhat after the force is removed (elastic). Polymers tend to be viscoelastic, whilst simple solids are not. How this relates to footing is important.

Attwood's footings coated in a viscoelastic polymer resist deformation, providing cushioning, but recover after the force is removed, providing rebound. Our competitors' coated surfaces are coated in wax. Wax is not a viscoelastic solid so does not provide the level of cushioning and rebound that Attwood's polymer coating does. Such surfaces feel 'dead' in comparison. What's more, we believe Pinnacle is kinder to limbs, because of the lower impact forces as a result of the cushioning effect.



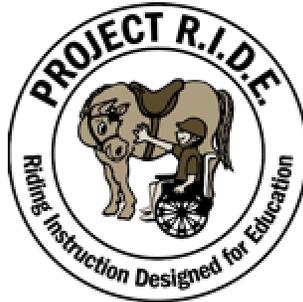
More about Pinnacle - This ultimate riding surface combines the latest in technology and our 20 years of equestrian arena footing experience. Pinnacle is engineered with premium materials to bring you the optimum in shear strength, minimal concussion and maximum viscoelastic rebound. Pinnacle surfaces are formulated from high quality silica sand and fibres, and coated with viscoelastic polymer, to bring you the optimum in shear strength, shock absorption and maximum viscoelastic rebound. Pinnacle is laser graded to a uniform depth of four inches over a carefully graded compacted base.

Properties of Pinnacle -

- Indoor and outdoor use.
- Requires no watering.
- Dust free.
- Industry leading concussion reduction and rebound.
- More stable than wax to extremes of temperature.
- Customisable to suite jumping, dressage, racing.

To know more, or to request a sample and quotes, please write in to us.

New Attwood Installation this month



This month, Attwood is installing its highly acclaimed Pinnacle footing to Elk Grove, California at Project Ride's riding arenas.



Project R.I.D.E. Inc., a nonprofit institution, provides therapeutic recreational horseback riding instruction to over 500 children and adults with special needs. Through the dedication and support of the Elk Grove Unified School District and the Elk Grove and Sacramento communities, Project R.I.D.E. has grown from a program that began in 1979 serving 30 students at Jessie Baker School to serving over 500 students from the greater metropolitan area. They operate in a 34,000 square foot totally enclosed equestrian center in Elk Grove with a nature trail, round pen and outside paddocks as well as a 52 acre ranch in Herald, where the horses rest and enjoy pasture time when they are not working.



Tina Calanchina, Executive Director commented, "We are so pleased with the footing. This will transform our facility. No longer will we have to deal with the dust from the old footing, and the continued maintenance just to keep the surface rideable. An added bonus for us is that the footing is very light in colour and this has significantly improved visibility in the arena, which is important for some of the visually-impaired kids we have. Now we won't need to upgrade our lighting!"

FEI Bureau main decisions



The FEI Bureau, following the recommendation of the FEI Executive Board, agreed on the launch of a global Olympic communications campaign in the countdown to the Rio 2016 Olympic Games.

The key focus of the campaign will be to boost the appeal of equestrian sport to a global audience, with the ultimate goal of safeguarding the sport for the future, and demonstrating that equestrian sport is contemporary and unique.

The campaign will be driven by FEI HQ working in tandem with National Federations and external creative, public relations and marketing advisers in key global territories.

For the entire report, please visit the [FEI website](#).

Footing Facts

Drying out of Footing

Last month we talked about drainage, and how this important feature of arena design can help to keep the surface moisture content within acceptable limits. This month we consider what could be thought of as the other side of the surface moisture content equation, namely evaporation from the surface.

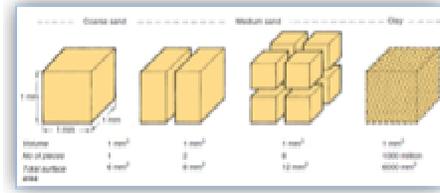
In both watered, and unwatered (coated) footings we require a certain level of drainage to ensure the arena does not become water-logged in severe rain. In the case of unwatered footing, the drainage is there simply to remove water - the footing does not rely on the presence of water to function properly so we want the drainage to remove as much water as possible. However for watered surface, drainage should operate more of a control function, because we want to maintain a certain moisture level for the footing to perform well. We discussed these aspects last month.



Another way water can leave the surface is through evaporation, or in simple terms, through drying. Here, there is a wealth of publically available scientific knowledge because sand has been used as a model to understand the drying of particulate solids for many years. In scientific terms, drying is a process whereby a solid material is exposed to air of a given temperature and humidity and it either loses or gains water until an equilibrium is established. In other words if the air contains less water than the solid, the solid will start to dry, until the moisture content in the air, and the solid are the same. We can see this in action when we hang out the laundry to dry outside.

Turning to sand in non-coated, watered footings specifically, there can be two types of water present: in damp sand there is water attached to the surface of every sand grain - this is known as *bound* water. This water is attracted to the surface of sand because the sand's chemistry renders it hydrophilic, i.e. it loves water. If we add more water to our damp sand, eventually there is enough water to start filling the voids between sand grains - this is known as *free* water. The free water behaves just like normal water - it boils at 100°C and freezes at 0°C, and so evaporates at the same rate as normal water. However the bound water on the surface of grains is less mobile than free water so is more difficult to evaporate from the surface. An important relevant concept to grasp is that a particulate solid like sand, composed of large grains has less surface (lower surface area) than the **same weight** of sand composed of smaller particles. This means that the sand with smaller grains has more bound water than the sand with larger grains. Out in the arena, this means than sand composed of smaller grains will lose water more slowly than sand with larger grains, all else being equal.

$$W = \frac{dw}{dt} = \frac{hA\Delta T}{\lambda} = k_G A (P_s - P_w)$$



But this is not the whole story because the drainage rate of sand tends to be slower for smaller grains. So although to reduce evaporation so that we don't have to water so regularly we want small grains, we then might compromise drainage. A further complicating factor is the presence of additives, which may or may not absorb water. For instance those additives which incorporate rubber have no water absorbency so tend to *increase* water loss because the pieces open up the footing.

At Attwood, our Eurotex additive absorbs water and helps to reduce evaporation and so improve water retention by 44%.

Other News

Longines FEI World Cup™ Jumping North American League

USA's Peter Lutz pilots Robin de Ponthual to victory in Las Vegas



An enthusiastic crowd in Las Vegas cheered each rider who entered the arena at the South Point Hotel and Casino, but it was the American Peter Lutz and Robin de Ponthual that claimed the final winning praise by beating a field of 30 to claim the \$100,000 Longines FEI World Cup™ Jumping North American League qualifier at CSI3* Las Vegas National.

Lutz's first World Cup qualifier victory marks a new milestone for the rider who has recently transitioned from developing young horses and riders to concentrating his efforts to the top of the sport.

"I spent many years teaching students and developing horses," Lutz said. "I had nice horses along the way, but I didn't really have the opportunity to hold onto a horse like Robin in the past and I'm very grateful that I can now. I spent a lot of years bringing along young horses and young riders, including Audrey, who I worked with for many years. I'm really proud of them; many have gone to be great riders. At this point, I'm concentrating more on riding, taking advantage of the opportunities that I have, and I'm really happy that I can do it."

You can follow the full story [here](#).

Our Social Media Channels



Continue to engage with us on the social media platform of your choice, [Twitter](#), [Facebook](#) and [Youtube](#). We love to hear from you!

You can also contact us at info@equestriansurfaces.com, info@attwood.in and enquiries@aesurfaces.co.uk.

Download our previous newsletters from our [archives](#).

*Attwood Equestrian Surfaces provides
meticulously engineered surfaces that benefit both the horse
and the rider*

