

MEETING WITH THE FOOTING EXPERT

CHRISTIAN BAUER – PART 1

MY EXPERIENCE REACHES OUT TO FIVE CONTINENTS; MY AIM IS TO USE LOCAL RAW MATERIALS. THE MAIN AND MOST IMPORTANT RAW MATERIAL IS ALWAYS GOING TO BE SAND. THE SAND IS IN CHARGE OF THE IMPACT FIRMNESS, THE GRIP, AND TO SOME SMALLER EXTEND THE CUSHIONING AND THE RESPONSIVENESS.

Finding the right raw material locally comes out of experience. I've been doing this for 20 years, I've worked with sand from all continents from many countries, and my experience has got me to know where to look for a certain type of material in each country.

I have installed all sorts of arenas, without mats, with rubber mats; with shock absorption mats which are coming now strongly into the market, but you always need the **specific** sand component, **for each different system**. And therefore it's not possible to build the same system in all the countries

Sometimes in some countries you cannot find the right raw material. That might mean that you will need to import raw material, leading to very high costs for the project that will not make any sense.

When I build an arena, my aim is to create an intended standard; there is a green, yellow and red area in each parameter.

They get measured and I always try to have my five parameters within the green allowance thresholds that come from the FEI with professor **Roepstorff** who has developed this measuring system throughout the last **10** years or more





AND HOW DO YOU STAY WITHIN THE GREEN?!

It is completely up to every arena builder in this world to get these parameters right. You can do it with irrigation from the top; you can do it with irrigation from the underneath. You can achieve it with sand with rubber mats or foam mats. All of this is possible if you have the right combination of all the material.

For example in EL-Jadida arena here in Morocco, we work with sand that has very high clay content. So I have to be very careful when I do my maintenance work, mainly at night when I water.

Because if I have any extra water it gets muddy, At the same time if I get it on the right water level,

riders tell me its highly elastic, it has very good shock absorption as well as responsiveness. So we can never reproduce this in an outdoor arena because you have too much influence of wind, sun and rain.

WHAT ABOUT MEASURING THE CUSHIONING AND ELASTICITY?

There is a machine that is approved by the FEI called the OBST. This is a mechanical hoof with sensors that is in between 1.5 to 2 tons. It hits the ground and these sensors measure horizontal and vertical force.

So it determines the grip, measure the rebound of the surface, **and all other parameters**. It is a standardized machine that can be used in all arenas around the world, **and therefore makes arenas scientifically comparable**.

After this, a lot of fingertip feeling is what I personally use to make my decisions. After 20 years of walking arenas and building arenas using different sands; you get to feel how your footing reacts to certain treatment then you decide to dig deeper or to make it less deep, you compact it overnight or you don't compact it, you put a lot of water on it or you put little water on it.

At the end it still depends on my instinct! I mean there is no arena where you can use standardized steps because parameters differ from a place to another.¹⁶

