Powder Coating: *Who Me?*

Sean Sullivan, Superintendent at Briarwood Country Club in Montana, USA, offers some practical advice on powder coating which can add years to some of your course furniture and make significant savings

Has the appearance of the ball washers on your course deteriorated to the point where aerosol paints are not helping anymore? How about your cups?

If you don't have the budget to replace these accessories, there is a way to bring back the "factory look." Like the factory, you can powder coat your course accessories. Here at Briarwood, we have powder coated our ball washers, ball washer brackets, cups, and sprinkler head tags.

Powder coating can be done in your shop with very little start up money. To start, you need a powder coat gun. A basic gun can be purchased from Electro Static Majic. The powder coat gun kit costs £119. Next, you will need an oven that is capable of baking at 180 C. Usually any oven is capable of this temperature, regardless of condition. Remember, the oven doesn't have to look pretty because all you need is the baking ability. I acquired our oven by asking the membership, in the monthly newsletter, if anyone was throwing one out or had one in storage somewhere. It took less than a week to get it. Most importantly, don't use your wife's oven as I will not be responsible for the trouble that causes.

We have a sandblaster to remove the old finishes off the equipment, but a sandblaster is not a necessity as long as you remove the old finish down to the metal. Once the old finish is removed, wipe down the metal with mineral spirits. That will remove any surface contamination such as oil, dirt, or dust. Also, use latex gloves when handling the metal to keep the oils on your fingers and hands from contaminating the metal surface. If you want to get a sandblaster, Northern Tool UK has a couple of DIY models that range in price from £185 to £250. Be sure to check the specification of the sandblaster to make sure you have an adequately sized air compressor.

Now you are ready for the powder coating process. Powder coating works by statically charging both the metal object being coated and the powder itself. When dusted, the powder sticks uniformly to the surface of the object. Once coated the object is placed in the preheated oven for 15-20 minutes. After the timer goes off, remove the item from the oven and let cool. Once cooled to the touch, that object is ready to be put into service. That's part of the benefits to powder coating, there is no drying time needed to cure the paint.

When we powder coated the ball washers, we fabricated t-bolts for the tops allowing us to coat the bottom edges. We screwed the t-bolts into the ball washer tops and placed on a cookie sheet. We attached the electrical lead to the cookie sheet. A

scrap piece of steel plate will work if your wife won't let you have an old baking tray. Remember to let her know that she won't be getting it back! The baking tray or steel plate is just an easy way of transferring the work to the oven. Apply a uniform coating of powder to the ball washer top and then bake for 15 minutes. Using the cookie sheet we were able to bake two tops at a time. For the body of the ball washer we fabricated a stand that resembles and functions like an engine stand. It allows us to rotate the ball washer so we can put on a uniform coat. The stand also supports the ball washer during the baking process; our oven isn't big enough to stand the ball washer on its end.

We built two stands so that we could be baking one ball washer and be coating another at the same time, to speed up production. We built the stands with scrap metal that we had lying around the shop. Although during the winter, production speed isn't a priority. It is always good to know your limits. Here in the States, if you send out the ball washers to be recoated it will cost about $60 for each ball washer, in the UK that is the equivalent to £38.

If you use aerosol paint the finish is gone by mid season. Note: the powder comes in a large variety of colours and textures so you can customize your ball washers any way you want. We coated 32 ball washers with an equivalent cost of £35 of powder. Even if you add in the cost of the gun, it is still cheaper than having five ball washers done by an outside business. Another benefit to doing your own powder coating is that you can put on a thicker coat than the factory. Remember that the factory is in it for the profit and what we need is durability. Once the parts are coated and cooled, the ball washer can be re-assembled and put back into service.

To coat the cups, thoroughly remove all sand and dirt from the cups. Sand grind, or chemically remove what's left of the old finish. You can purchase ¼ kg of gloss white powder for 7.99 pounds sterling. I suggest that you buy extra powder to have on hand for when you need to freshen up the cups. The ¼ kg will be enough to restore two sets of cups. The powder coated finish will last longer than aerosol painting and is quicker to do. It takes about 10 minutes to cleanup and remove the old finish. The act of powder coating takes about two minutes, at most. Comparing that to two or three coat of aerosol paint, if applied

correctly, will take 5-10 minutes. Bake the cups for 15 minutes and when the cups are cool to the touch, are ready to be placed into service. Painting will take several hours to harden, depending on temperature and humidity.

Total time for the powder coating is 30 minutes for individual pieces and each piece has a better finish than with aerosol painting. I don't have the replacement cost for cups in the UK, but I can guess that it is more than £7.99 for two complete sets of cups.

We fabricated our own ball washer brackets to support the ball washers on wooden posts. I purchased 1 kg of gloss black powder which was enough to cover 39 brackets, with some powder left over.

We fabricated a support stand to hold four brackets for the powder coating and baking process. After fabricating the brackets we removed all the sharp edges with a grinder.

Then we thoroughly cleaned the metal with mineral spirits. We placed four brackets on the home-made stand and began to powder coat. Remember to check all the corners for adequate coverage.

Even as pseudo-experts in the powder coat process, we still missed spots which then needed a second coat to cover. Once coated, bake for 15-20 minutes and that's it. You will have a glossy finish, which is corrosion resistant, scratch resistant, and is also UV resistant. We were able to fabricate and powder coat 39 brackets for 1/10 the cost of the same bracket, from a golf industry supplier.

If your course accessories look unsightly but are still useable, consider refinishing them by powder coating. It is very inexpensive to get started, and powder is no more expensive than the cheapest aerosol paint.

Yet the finish will last one or more seasons and comes in more colors and textures than you can imagine. By doing our own ball washers, we saved the course the US equivalent of £1312. By fabricating and powder coating our own brackets, we saved the equivalent of £500. Recoating the inside of the cups saved us the equivalent of £220 each time we would have replaced the cups. For the first season we saved Briarwood over £3125, while giving the course accessories a "factory fresh" look. I already own the powder coat gun, so our investment was small.

We already had the sandblasting cabinet, which speeds up the process, but is not necessary to have good results. Powder coating can be used on any metal part in your shop, on which you would like a durable, corrosion resistant finish. The limiting factor is the size of the oven and even that can be overcome by investing an infrared heat lamp.

You can check out the powder coat gun and supplies at www.electrostaticmajic.co.uk. There are other suppliers of DIY powder coat supplies, the previously mentioned supplier is the first one I came across while trying to convert this article to English.

If you would like specific questions answered you can e-mail me at briarmain@180com.net.