

A Simple Kiln

An easy to make kiln for small batches of blanks

Every turner comes up against the problem of how to dry timber effectively while minimising losses due to splits, checks, etc. etc. Those with patience build up a stock of timber, plank it, allow it to air dry for some years, rough turn it, bring it into the house to let it equilibrate, finish turn it, then hold it for a few more weeks just in case – phew!! But that’s not much good when the present we undertook to make last month is now almost due! Commercially, drying of timber is speeded up in a large slow cooker or kiln, but these tend to be expensive to buy and run.

All kilns work on the same principle: the wood is slightly heated to encourage water to migrate to the surface of the timber where it is evaporated into a stream of circulating dry air. So there

we have the principle – very gentle heat and movement of dry air. So how can we put this knowledge to our advantage and dry our timber effectively?

“...Commercially, drying of timber is speeded up in a large kiln but these are expensive...”

What’s needed is a box to put the timber in, a gentle heat source and a fan to move the air about. Many turners out there will be familiar with someone who has built a kiln out of an old fridge and their system works for them.

However what I will describe here is simpler and after 18 months in use is pretty well proven. One cautionary note



THE COMPLETE (BUT EMPTY) KILN



60W BULB AS A HEAT SOURCE

don't need (or want) a hermetic seal, just a neatly fitting door. Next you need to wire in a light. The simplest way (although maybe not the best way) is to mount a fixed batten fitting to the top inside of the press and fit a plug to the other end of the lead. Fit a 3-amp fuse to the plug to add some protection. Now for the fan and a small fan will do fine here. Many computer and electronic stores sell small fans very cheaply for use in computer equipment. These are designed for long use times and any one of them will do. I scavenged a fan from an old microwave – if you do this, also take the magnets from the microwave – they are fantastic for holding small items on the lathe. Cut a hole in the wall of the press the diameter of the fan and mount the fan so that air is pulled out of the box.

though – making this kiln involves some electrical wiring jobs. If you are not sure of what you are doing, seek the help of an electrician and please, please, be careful – electricity is a good servant but a very bad master.

So empty out one of those presses on your wall. Pick one that has a back i.e. it is a closed box. Much moisture can travel through the block wall and the backing in the press will eliminate this.

Next, adjust the doors so that they close reasonably tightly. You



EXTRACTOR FAN FROM SCRAP MICROWAVE



FAN VIEWED FROM OUTSIDE THE KILN

me. I use a 3-week drying period split into 3 sections: Week 1 – fan on all the time, light off all the time; Week 2 – fan on all the time, light on and off in 12 hour shifts; Week 3 – Fan on/off in 12 hour shifts, light on all the time. You can see that the drying starts gently with just air circulation and gradually more heat is added.

If the timber is considerably thicker than the 1" to 1 1/2"

Make a small cage to box in the fan – some mesh folded around a simple frame is OK. Finally wire in a switch so that you can turn the fan on and off.

Now to run the kiln. I fill it with 6 to 10 bowls, (usually of mixed moisture content) each about 1" to 1 1/2" thick. This thickness allows you to turn the bowl after it has warped a bit during drying. Any faults or cracks in the bowls should be sealed with superglue before drying and it is a good idea to check the bowls each day for the first few days when most movement takes place.

Finally for the drying schedule. I have worked this out by trial and error and all I can say is that it works well for

mentioned above then increase each section of the drying time accordingly. I have found that some movement will take place after finish turning and bringing the piece in doors but movement is very slight and I have never had a failure with this system.

Since I started to use this system, I now avoid using dry timber and tend only to use wet timber saving me time and money on timber supplies. Another benefit of the system is that it means that I can store the timber outdoors without being worried that it will pick back up moisture from the atmosphere or rain.