

Extract from WAWA Newsletter issue 181 dated November/December 2015

### **Observations Wandi WEWS September 2015**

**Alan Williams** who introduced the very new and equally interesting technology surrounding 3D Printing. Alan described 3D Printing as literally the new industrial revolution. He introduced a 3D Printer and began the process of making an 'Escher's Lizard'. He informed us it was not an instant thing and that it would take 29 minutes to be completed. Alan explained how CAD Software in three-dimensional format was used to create a drawing of the actual object.

Then the printer loaded with plastic went about doing its job of printing the object in question. Two methods namely 'Additive Manufacturing' and 'Subtractive Manufacturing' were explained.

The moving of a block of plastic to a specific shape was Additive Manufacturing. It is the adding of material to a shape then slicing it up. The thinner the slicing, the better the model. Alan explained how the method was computer controlled using a CNC process.

The process itself was done by either a solid based piece, a liquid-based product which sets, or it was powder based.

Alan went on to explain that it was a myth regarding 3D printing replacing traditional manufacturing methods. He outlined how it was simply complementary technology which allowed for the making of significantly more complex items.

Alan explained how many art design shapes could be made using this technique as well as shoes and clothing. You can even have a person scanned with a laser and then make them made to measure clothing. Medical applications, dental crowns and bridges, hip replacement parts, hearing aids, teeth aligners (commonly referred to as braces) are all capable of being made using this new technology.

Alan also explained how prosthetic limbs could be made. Alan showed many pictures of how the technology had been incorporated into the creation of a vast array of items.

All in all, a very interesting topic on just how far technology has come in this field.



## **Observations Wandii WEWS September 2016**

**Alan Williams** was the first demonstrator for the day.

Alan introduced his demonstration topic as 'Embellishments'. Alan apologised for not having brought with him a number of items he had already completed to show everyone.

Alan then explained his line of thought regarding embellishing. He advised how he believed it was very important to embellish an item as a means of changing an item's appearance from something that was rather plain looking to something that was much more attractive.

He considered embellishing an item just for the sake of it was not such a good idea. He also mentioned that it was not a good idea when you have a piece of wood with good grain and or colours to then embellish it for the sake of it.

Alan also advised how he considered it was good if you could combine the two, some parts of timber piece embellished, other parts left as they are.

Lastly Alan advised how embellishment could hide a fault in the piece of wood. Alan then introduced a piece of timber that was rather plain looking, and it had some sap lines in it. The piece of timber had already been sanded and Alan stated that this should be finished before proceeding to the embellishment.

Using a Dremel tool with a small cutting piece attached, Alan produced a textured finish by cutting small holes in the wood. The pattern was random and different size bits were used to make the holes. Starting off with the largest of the bits and moving down to the smallest one. Alan called this technique 'Stippling'. He advised that the best effect was random cutting of the holes in the wood as opposed to neat lines or patterns.

Then using ebonizing fluid, home-made using vinegar and steel wool soaked in a glass jar, Alan advised that the use of this would blacken the wood. This effect was created by a chemical reaction with the fluid and the tannins in the wood. Some timbers have more tannins and so they blacken much more than others.

The piece of timber Alan used was Marri and when embellishing the wood, he was trying to mimic the gum vein. He used milled cutters with tiny teeth to cut holes in the timber.

Alan reminded us that it was important to hold the Dremel firmly and when bringing it into contact with the wood to make sure the cutter did not run along the wood. Alan used a Dremel 400 which had a variable speed control and a digital readout at the bottom of the handle.

Next Alan put some ebonizing fluid onto a piece of the wood then he proceeded to cut holes in the same area as the fluid using the different size cutting blades. This time he ended up with white holes against a black background. Alan advised how you can soon tell that the teeth of a bit are going blunt because the wood burns at the area of the hole and the cut is not neat.

Next Alan put a circular saw blade on the Dremel and created an embellished finish by cutting small lines into the wood. Next a series of wire brushes were introduced, and they tended to tear at the wood. The wood was mounted on the lathe. The tearing however did produce a very effective looking embellishment. He had the wire brush turning in the opposite direction as the wood on the lathe. This increased the degree of ripping of the wood. He also demonstrated how the wire brush effect actually enhanced the grain and growth rings of the wood.

Next Alan introduced a Makita die grinder. The grinder was fitted with a tip which produced a textured spiral shape. The next item introduced was an Arbortech cutter which only had two teeth. This cutter created a very rough ripped texture. A chainsaw bit with four teeth was also introduced.

Lastly using a cup burr Alan cut little nipple-like cuts into the timber and explained how this cutter burnt the shape into the wood. A very interesting demonstration.

Extract from WAWA Newsletter issue 211 dated August 2020

### **Jack de Vos Award 2020: Allan Williams – Member No 1814**

Allan Williams has for many years been a positive contributor to the Wandi Woodturners.

Over the years he has taken on many roles, including demonstrator, committee member, and workshop organiser.

After an exceedingly difficult beginning to the club year in 2018/2019, Allan organised a Special General Meeting in November of that year to re-establish the club committee.

At that meeting he was voted into the position of Convenor and began the process of recruiting a new committee and setting the club back on track.

As well as demonstrating exemplary leadership in that instance, Allan has had a number of other successes.

He worked as a club contact and liaison during the installation of the new dust extraction system, and in the last year he has sought and obtained the funding that allowed the installation of the Workshop's new lighting system. This year, Allan has successfully managed the closedown and reopening of the club caused by the COVID-19 crisis. In his role as convenor Allan has also advised and guided the other members of the group, helping them to progress and achieve in the craft.

Allan Williams has served the Wandi Woodturners extremely well indeed and is a fitting recipient of the Jack de Vos award for 2020.

