

Cabinet Makers

The Cabinet Makers had a most interesting meeting on Saturday 14 August 2010 when they visited the factory of Alexander Wildervanck. The factory is located in a lovely rural area near Rayton. Further detail of Wildervanck Furniture can be seen on their website www.wildervanckfurniture.co.za. The factory produces fine furniture, kitchen cabinets and coffins. Alexander did a course on veneering in the UK and has incorporated this knowledge into his factory production. The main theme of the meeting was **veneering**, but we also touched on other topics.



Veneered olive wood (olienhout) table



View of factory



Display area and some furniture

We had a record attendance of 23 persons which included 5 persons from the factory and also colleagues from the Leeupoort Woodworkers Group.

The veneering process will be illustrated below, followed by other topics.

The veneer is procured from two sources:

- Purchased (e.g. Veneer Concepts, Johannesburg). Most of this veneer is imported and commercially sliced veneer is about 0.6 mm thick which reduces to about 0.3 mm after sanding.
- Cut in the factory. Jacaranda is used and is cut in about 1.5 mm thick veneer strips.

Alexander first showed a cabinet which was being made with imported walnut veneer and which has various inlays.



Group examining walnut veneered cabinet



Detail of walnut veneering and inlay work

Alexander has been developing kitchen cabinets with jacaranda veneering to save on solid wood and demonstrated the process which is set out below.



Surfacing the face of the jacaranda



Spraying Holz-Gleit on Table Saw



Sawing jacaranda veneer with a rip blade
Note use of safety glasses

The table saw is sprayed with Holz-Gleit (obtainable at Executool or Austro) to reduce friction and ensure a smooth cut. After each cut the plank is resurfaced. The sawn side of the veneer is smoothed down using a belt sander with 200 grit sandpaper. The veneer pieces are stacked in sequence and held down by a weight until used.

The jacaranda veneer is then clamped in a shooting board and the edges are trimmed straight and square prior to glueing.



Trimming veneer edges in a shooting board
The plane is a very sharp Veritas Plane

The veneer is applied to a single melamine faced MDF board for a kitchen cabinet door. The melamine tends to bow the board and the veneer rectifies this somewhat to a plane surface. It is important that both sides of the MDF receive the same treatment. Melamine on the one side and 1.5 mm thick wood veneer on the other is not an ideal balance. But the situation is overcome in part by the fact that the MDF is thicker (22 mm) and bows less easily due to unbalanced surface stresses. Due to the nature of wanting to establish symmetrical patterns, one leaf will be glued down on the sawn side and the next one on the surfaced side etc. In the case of the sawn side being glued it is given a quick clean-up with the belt sander.

The veneer strips are selected and taped together with either the special imported elastic veneering tape or normal masking tape. The glue (Titebond 50 (Alcolin product)) is applied evenly on the MDF board in a thin layer by roller and the taped veneer is first folded in a fan shape as shown in the photograph and the “vee” drawn over the glued board to spread some glue on the edges of the veneer. The veneer is placed on the board and the edges taped in several places. A piece of plastic followed by soft board is placed on top. A second board is treated in the same way. The sandwiched combination is then placed in a vacuum press bag which is sealed and air evacuated. Special porous strips (called breather fabric) are placed in the bag to ensure that all air is free to travel to the evacuation hose. If one does not have a vacuum bag, then it is possible to use suitable clamping boards. The soft board is used as it is flexible and can take up minor imperfections. The vacuum applied was – 0.8 bar and the pressure is held for about 2 hours until the glue has set.

After removal from the vacuum bag, the overhanging veneer is trimmed, solid wood edging glued to the edges of the board with the same glue mentioned above. Alexander uses a

Lamello Flush Milling Machine which can mill up to 45 mm width (expensive but excellent!) for trimming the solid wood edging flush with the veneer. Final sanding of the panel goes as follows: A quick "getting flat" with a 120 grit belt on a belt sander. Then in sequence: 120, 220 and 320 grit on a 150 mm rotary sander.



Taping selected veneer sheets together



Applying glue to the edges of the veneer



Spreading glue on the MDF



Vacuum press
Note taped sides of sheets



Edge trimming the veneered door

The factory is fitted with an excellent paint spray booth which has a powerful ventilation system. Use is made of Woodline Clear Sealer 8270 which is applied as a heavy coat to infill the grain. Sanding follows and then a light coat of clear lacquer. In the UK there is a general move towards water based paints for environmental and health reasons. These are not yet available in South Africa.

Other topics we dealt with were:

- A very good Internet woodworking forum is the Canadian Woodworking Forum: <http://forum.canadianwoodworking.com/index.php>. There is a minor procedure to become a member.
- Alexander uses a laser level (obtainable from Fischer Fixings) for accurate setting out of kitchen cabinets.
- The costing of woodwork products is critical for commercial viability. The manufacturer must develop trust with his client. Alexander uses a spreadsheet for costing and has a rough rule of thumb that if the price is less than 4 times the material cost then you will work at a loss! This ratio is for moderately refined handcrafted furniture. With veneering the ratio becomes much higher but there Alexander is still discovering his labour hours. With kitchen cabinets where there is fairly straight forward melamine panels to be cut and joined (screwed), the ratio comes down to between 2.5 and 3. One can imagine with turning work that these ratios fly out the window altogether as material costs are minimal and the time factor is dominant.
- Restoration work is often a “loss-leader” but can be a good marketing tool and attracts new work.
- In this age of machinery we often ignore hand tools. A block plane is a most useful tool for touching up end grain due to its blade with a low angle of attack.
- We also examined several examples of excellent furniture and it was good to see innovative design and construction.

We were so taken with the factory tour that we have arranged for Alexander to make a presentation on veneering at the Association’s October monthly meeting as it is a topic of broad interest.

The **next meeting** of the Cabinet Makers will take place on **Saturday 11 September at 09h00 at 158 High St, Ashlea Gardens** (my workshop). The topics for discussion will be:

- Photographing your work
- Judging your cabinet work.

An article from Fine Woodworking on photography has been distributed separately to members of the Cabinet Makers Group. Do bring your cameras to the meeting and test your skills!

Paul Roberts
30.8.2010