

# Timber Talk

## Tunncliffe's

### December 2010

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## Another Year Older and...

Another year gone by and despite last year's forecasts that the economy was picking up we have not really seen that happening. The building industry is still very quiet and we just have to be a little patient for business to pick up. When compared with other parts of the world we think Down Under is nowhere near as much affected by the current economic downturn, enough reason to stay optimistic. The timber prices took a serious hike this year, mainly due to the increased demand from Asia. Although the increases have eased we do not see the prices coming down.

Progress within CTS Ltd on designing and testing exterior timber joinery to include double glazing and meeting performance standard NZS 4211 has been slow. The market situation has been such that the participating companies had to focus on their day to day business. Also test booth availability is an issue with the aluminum industry going through changes as well having to redesign and test their products as well. We expect to be able to get going again soon and finalize the product range within the next 6 months.

ThermoWood®230 has been very well received in the Joinery market

## Christmas Break

At Tunncliffe's we finish the year on Thursday 23 December 2010, back in full swing on Monday 17 January 2011. We will have our office manned from Wednesday 12 January 2011 to take any orders and dispatching stock items.



and has taken the number one spot in our beehive box sales which, again, has been very strong this year. We reported our first export order into Australia last year and can confirm that there has been several follow ups since. It is pleasing to see that the Aussie beekeeper is also developing a taste of the ThermoWood box.

We would like to thank our customers for their support in 2010 and wish you all a safe and happy Christmas.

## Schools and ThermoWood®230

Tunncliffe's General Manager Daan Olthuis went along with one of his kids to an introduction evening at Trident High School Whakatane, towards the end of 2009. With sawdust in the blood it was obvious how the woodwork corner attracted attention.



Amongst the pieces of work on display, students had made that year, were Cape Cod chairs. Nice looking outdoor furniture made from H3 CCA treated Radiata Pine clears.

It didn't take long for a conversation to start up with one of the tech-teachers and it was very easy to get inspired by a motivated teacher telling about his passion for working with wood and teaching kids. Soon the talk was about the school projects and more particularly about making outdoor furniture with Tanalised New Zealand Radiata Pine.

Tunncliffe's had just started marketing its new timber product; ThermoWood®230 and it became clear that this would be an interesting alternative to H3 CCA Radiata Clears.

The School had a number of concerns with using H3 CCA Radiata Clears. First of all the health and safety concern with regard to using chemically treated timber, in particular the risk of exposure to chemical

residuals on the timber, sawdust and shavings. Secondly there was stability of the timber and last but not least the environmental concerns with regard to the disposal of wood waste.

ThermoWood®230 is a "green product", chemically free and therefore very safe to use.

The meeting that evening resulted in a year-long project at Trident High School where ThermoWood®230 was used for

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# An Industry Issue

## Timber Joinery and Dark Colour Paint

It ought to be standard industry practice for timber joiners to recommend not using dark colours when painting timber joinery, especially when the joinery is exposed to direct sunlight all day. Heat caused by the summer sun is likely to cause serious problems for home owners, architects, builders, joiners and timber suppliers.

The sun is producing rays giving us light and heat. The more rays you receive per square unit (rays per m2) the higher the intensity, the hotter it gets. The higher the sun climbs in our sky the higher the intensity. The maximum is reached when the rays are hitting the surface at 90 degrees (perpendicular). This happens in high summer, in the middle of the day.

Most of us know that a dark surface gets hotter than a light surface. A dark surface absorbs the sunrays and therefore heat, where as a light surface reflects the sunrays and therefore diverting heat away.

Our New Zealand sun is harsh; it's high in ultra violet rays and can be very hot. We take care and protect our skin with sunblock to avoid nasty damage and seek protection from shade as much as we can. We should do the same with our timber joinery, keep it out of the sun as much as possible and protect it using good quality paint; make it a good job with a minimum of three layers and preferably using white colours only.

We recently have seen a couple of jobs where our finger jointed H3.2 TanE Radiata pine has been used in a house-lot of joinery where the finger joints failed by coming apart. This happened in doorsills which were painted in a dark green colour, north

facing and exposed to direct sunlight all day. In both cases the joinery in areas that were not exposed to direct sunlight all day was in perfect condition.

A doorsill being in its horizontal flat projection will receive the maximum heat when compared with the rest of the joinery. The timber can get very hot, so hot that you burn yourself standing on it with your bare feet. Just remember how hot the sand on a beach can get despite the fact that the sand has a light colour. When the timber gets hot it dries out, potentially down to 0% where as it normally is 12% to 14%. As the timber is losing moisture it shrinks.

A doorsill is usually only partly exposed; the sash in the joinery covers the back section of it. The exposed front part of the sill dries out and shrinks, the timber in the protected parts will not. This uneven drying is causing tension, there is a build-up of stress within the timber and between the finger-jointed shook (blocks), which can cause the finger joints to fail.

The forces involved with shrinking and swelling of timber cannot be underestimated; they are huge. In the days of the Roman Empire a method of quarrying marble was to drive a wedge of dry timber into a crack and soak it with water. The force of the swelling timber was used to break up the marble rock.

The problem described above is not limited to finger jointed pine, it affects timber in general.

The colour choice for the joinery in a house design is critical and requires careful



consideration at the early stages of the building process. If dark colours are desired the appropriate design and materials should be applied. The lessor exposure to sunlight the darker the colour of the joinery can be.

Timber joinery needs to be protected from all day long direct sunlight and it is recommended to make use of awnings, eaves or something similar. If that cannot be achieved the joinery must not be painted in any other colour than white.

If you look at old style houses with timber joinery you will notice eaves and other measures of protection including white paint. When talking to old school timber joiners they are very much aware of the potential problems. We believe that overtime designers may have got out of touch with the specifics of timber joinery as aluminium joinery has taken over the majority of the market.

We strongly recommend our timber joinery customers to give appropriate advice and recommendations to the end user of their product to avoid the stress, heartache and pain these problems can cause.

## Schools and ThermoWood®230 Continued

outdoor furniture but due to its other range of desirable features also used in other applications with very good results.

Wood-tech teacher Nigel Rowland commented that besides addressing the "CCA-concerns" the big plus is the increased stability; ThermoWood®230 is twice as stable as traditional kiln dried Radiata. It is easy to machine and finishes really well, it cuts like butter and does not splinter. These are great features when teaching kids; it's easier to get good results. Students can put their work away for a week and find it back without it having moved. Instability used to be a big frustration when working with

Radiata clears. It also looks good, no messy paint sessions to finish, just oil. We had purchased the ThermoWood®230 for our exterior furniture project but ended up using it for indoors as well and had to order more...

As a lead in to the project it was great to come up with something new. Wood modification is leading edge in wood technology and makes it an interesting subject with a good story to tell. It was relatively easy to package up a program and to motivate and inspire the kids to get involved. We will be back for more next year and can recommend other schools to look as using ThermoWood®230 for their program next year.