

Tasmanian treasurer visits Furntech-AFRDI

The treasurer in the Tasmania State government, Peter Gutwein, recently visited Furntech-AFRDI, to see first-hand the growing range of work done by the company.

Furntech-AFRDI is located on the Newnham (North Launceston) campus of the University of Tasmania.

From small beginnings, and servicing only furniture manufacturers in Australia and New Zealand, Furntech-AFRDI now trades world-wide, and is widely consulted as a market leader in testing and certification of furniture.

On the domestic front, Furntech-AFRDI is actively pursuing closer links with the University of Tasmania, in particular the Centre for Sustainable Architecture with Wood (known as CSAW), where the possibility exists for Furntech-AFRDI to perform a range of tests on behalf of the centre.

Furntech-AFRDI has also been scaling up an ad hoc arrangement with interior design students within the School of Architecture, introducing them to the process of testing to help validate design decisions.



In a similar vein, we have also recently tested a wooden chair built by furniture design students from the University of Tasmania – and with some surprising results – see story page 5.

Our industry's technology is rapidly changing – is training keeping pace?

by the Editor

If ever proof were needed of the old adage that today's newspaper wraps tomorrow's fish and chips, it lies in the overnight election of Malcolm Turnbull to replace Tony Abbott as Prime Minister.

In the 26 years of AFRDI's existence, the broad community of manufacturers, resellers and consumers we serve has changed at a rapid rate. But now, the rate of change is accelerating, and one of the questions that arises, is the technical training that underpins our industry still appropriate and reflective of this rapid rate of change?

I was recently browsing an article in the Harvard Business Review (HBR), highlighting the problems in the United States of finding qualified people to hire. As the article pointed out, it's not possible to take a displaced factory worker and turn them into a worker in a modern factory using high tech machines and sophisticated software – or at least, not overnight.

As the HBR sees it, programs to retrain workers have been suffering from the same problem since the demise of many of Australia's foundation industries (think steel) in the 1980s, and now foreshadowed contractions in coal. The problem is that by the time a training program is developed and tested, the work that is the object of the program has probably changed or disappeared.

How can programs be developed when technology is changing at such a speed? As the HBR puts it, it's a bit like shooting at the proverbial moving target, a target that keeps moving on at an accelerating pace.

Modern education places great value on problem solving, decision making and collaboration within the workplace, all worthy and lofty ideals, but are they being translated in a practical way to the people who actually do the work? What happens when the current generation of older workers who learnt on the job and by the seat of their pants retires?

It's easy to say that all of the above is a reflection of the current situation in the United States, but it is likely to have some resonance in Australia as well. As a country (and this is not a political comment) are we really putting our backs into positively addressing a looming problem? In office discussion, one of my colleagues said the answer is simple – look to Germany where there is a culture of solid education, and an appreciation of science: all of this influencing the way skills in the workforce are developed, and ongoing education is a matter of course.

And then there is the over-arching question of the ongoing role of China and the other burgeoning industrial economies within our region. The temptation is to think that if Australia continues to ramp up its importation of furniture components, there won't be much of a traditional industry here, and that training in the traditional broader skills expected of furniture industry workers won't carry the same importance it once did.

Doubtless this piece will give rise to a round of criticism – but let's hope it kicks off some debate on practical ways to give the Australian furniture industry workforce of the future the best possible start, and constant assessment of training and goal-setting has to be part of the equation.

A tale of two chairs - the Ridgi-Didge, and the Super Duty Ridgi-Didge, and how simple name changes are undermining the value of testing and certification

We humans take a name, or series of given names, not long after we're born, and we are known by that identity for the rest of our lives, unless our family name is changed by marriage, or all our names are changed by deed poll. Basically though, our name is our name, for all time, and people come to know and trust us under this identity.

AFRDI takes the position that chairs also have a unique identity, the name under which they are tested and certified by us.

So, it should follow that the AFRDI tested and certified Ridgi-Didge chair, to use a fictitious Australian-sounding name, will remain the Ridgi-Didge until such time as its makers decide to give it a new name. If they do, they need to let us know so we can update the chair's certification.

If an intending buyer looks in a shop window and sees the Ridgi-Didge, he or she can then look up the chair on the AFRDI Website at www.furntech.org.au and see that in fact, the Ridgi-Didge is a 'true-blue' (AFRDI Blue Tick) chair with fine testing achievements.

The story should end here, but all too often it doesn't, because some people decide to capitalize on the fame of the Ridgi-Didge and call it, perhaps, the **Super Duty** Ridgi-Didge, and now in keeping with its up-market name, it's updated with say a 150kg weight rating.

So what happens now when Mr Consumer looks in the shop window, or more likely searches online, and sees the 150kg rated Super Duty Ridgi-Didge advertised? It looks the same as the original, as far as can be seen, but is it really the same? Is it possible that vital parts have been downgraded just a bit to keep the final price down? Is the upholstery still the same, or does it just look the same?

More importantly, Mr Consumer might well be concerned about the bona fides of the Super Duty. Has it actually been tested for people weighing up to 150kg, and is it known to be safe?*

Such questions should be on every consumer's mind as they consider which chair to buy. **It should loom even larger for employers, because they need to demonstrate a duty of care towards employees, and a sure way to do that is to buy tested and certified furniture.**

Over the past few years, AFRDI has pursued retailers and distributors who shamelessly change the names of well known products to meet their own perceived marketing needs, boost the 'weight rating' of chairs, also for marketing advantage, and top it all off by displaying the AFRDI logo and claiming that such products are AFRDI Level 6.

AFRDI does not acknowledge a certified chair with changed names – neither should you. We call on the honest majority of resellers to 'dob in' to AFRDI examples of false advertising. Such information will be treated confidentially. **False practice benefits only the fly by nights.**

**Concern over product safety should be foremost when choosing commercial seating. A recent office chair accident in Canberra brought legal damages of \$1.2million.*

Suite of tests recognizes changing needs in society

AFRDI Standard 151, a Standard for Rated Load testing of fixed height chairs and seating.

The name itself doesn't raise an immediate sense of excitement, but the content embodied in the Standard should be of vital importance both to producers of fixed height seating and consumers who use these chairs.

Let's unpack the above statement a little. Traditional testing of fixed height seating assumes that chairs which pass will be suitable for users weighing up to around 110kg for Level 6 (severe commercial) and 100kg for Levels 4 and 5. Rated Load testing, in general, is a response to the recent increases in both human height and weight, to the point where people who might 30 years ago have been considered statistical outliers are now relatively commonplace.

Rated Load testing, in short, leads to more robust products. It does this by testing at a series of levels, starting at 135kg, and progressing through 160kg, 185kg and, for bariatric use, right out to 300kg.

While the 'upper reaches' of the Standard will only apply to a relatively small number of chairs, testing at 135kg is already assuming a considerable importance. The reason is simple – the Standard takes a position that when providing public seating in a restaurant, a library, or a shopping plaza - it's just about impossible to determine who will sit where.

In other words, all the seating needs to be able to safely accommodate heavier than normal people if there is to be a meaningful attempt to provide safe furniture free from sudden collapse to nearly all users.

Australia, like the United States before it, is entering an era where accidents occasioning personal injury almost invariably bring on claims of payment for liability. A sensible approach to avoiding such claims is to specify seating which has a greater innate ability to resist sudden collapse or breakage through use, or indeed, abuse.

In much the same pattern that has developed following the introduction of the preceding AFRDI Rated Load Standard for swivel chairs, or gas-lift office chairs, a new breed of chairs is emerging which satisfy the entry point testing for AFRDI Standard 151. Some are aiming even higher.

And in what must seem like getting something for nothing, Rated Load testing costs very little more than standard testing, the 25% additional cost reflecting additional time spent on testing machines, coupled with a more extensive battery of physical tests.

A word of warning, though. As AFRDI experienced when Rated Load testing started on swivel office chairs, a chair qualified at traditional testing levels will not necessarily successfully pass testing at more elevated levels. It calls into question the common marketing practice of giving higher 'load ratings' to chairs than the levels at which AFRDI tested them.

In summary, AFRDI believes most fixed height seating that's going to be used in a public environment should be Rated Load tested, both to protect the supplier and the user.

Standards Update:

AS/NZS 3813 – The working group is re-examining UV and weathering section.

AS/NZS 4442/3 The next working group meeting on 18 November will consider stability, strength and durability sections of the proposed revised Standard.

AS/NZS 4610 The kick-off meeting for the new project has been held and the working group will again meet early 2016 when the preceding two work items have progressed further.

Getting back to fundamentals – students find prototype testing reveals design flaws

It's a simple enough recipe – task design students from the School of Furniture Design within the University of Tasmania to design a wooden chair – and make it strong.

Further, to encourage the concept of collaborative work, the chair's components will be made by three teams – so dialogue and close understanding of intended outcomes is essential. Formal testing can be revealing: recently AFRDI tested a chair which had an air of fragility, but in fact proved extremely tough.

This time, Level 3 testing (130kg applied vertically, 56kg to the backrest), promoted a loud cracking sound as a rear rail split around a domino joint.

But then, encouraged by students wanting to test the mettle of their chair, chair testing team leader Eric Paul applied up to 550kg vertically to the remaining 'stool' which showed no ill effects.



Top: Lecturer Matt Prince looks on as team leader Eric Paul examines the chair prior to testing.

Above: Eric explains how racking forces will be applied to the chair's back during the test.

Centre right: Its back broken, the chair easily endured 550kg of vertical loading without even a creak.

Bottom right: The back rail split around the domino joint.



The major US furniture manufacturer Knoll is suing a competing business, alleging intellectual property infringement.

They have filed a lawsuit against Belnick Inc., doing business as Flash Furniture of Canton, Georgia, alleging patent infringement and unfair competition. According to the complaint, Knoll licenses the rights to the MultiGeneration chair from the company that owns the patent, Formway Furniture in New Zealand. The suit says Flash Furniture is attempting to market and sell the product through its own website and other national major retailers, including Staples, Wal-Mart, bizchair.com and Amazon.

The suit says the New Zealand business has given Knoll rights to the MultiGeneration chair as exclusive sublicensee, and the plaintiff pays royalties to use the design. Knoll alleges the defendants' chairs are substantially similar to the MultiGeneration chair.

Knoll Inc. seeks injunctive action, demanding Flash Furniture recall all infringing products and surrender them for destruction. Knoll also seeks actual, treble and punitive damages; interest; attorney fees; and court costs.

from Office Furniture News

An important section of AFRDI's Sustainability Standard 150 deals with ethical sourcing of materials, and in particular, timber. While the 'penalty' for non-compliance is loss of status points towards attaining recognition under the Standard, in Asia, where much of the timber for Australian furniture is sourced, authorities take a far more severe view of misuse of natural resources.

Accordingly, the Chinese government has launched a diplomatic protest after the government of Myanmar, the former Burma, handed down 150 life sentences to Chinese nationals for illegal logging near the two countries' shared border.

The mass sentencing, which sparked outraged editorials in the Chinese media, came after the loggers were arrested in January during a crackdown on illegal forestry activities.

For years, China allegedly plundered Myanmar's once abundant raw materials. Commenting on the penalties, the Myanmar government said it would not interfere in the legal process, adding that when citizens of Myanmar break the law in other countries, they face sentence by the laws of those countries. A life sentence in Myanmar is generally thought to amount to 20 years' imprisonment.

Legislation to reduce the tax offsets available under the R&D tax incentive by 1.5 per cent has been defeated in the Senate.

This means that, despite the reduction to the company tax rate for small businesses, the R&D tax offsets remain at 45 per cent (refundable offset for eligible entities with turnover of less than \$20million) and 40 per cent (non-refundable offset for all other eligible entities).

AFRDI is an accredited laboratory registered to carry out research under the Federal Government's R&D tax incentive program.

A material made of tree pulp could one day charge your mobile phone, according to cutting-edge research from KTH, the Swedish Royal Institute of Technology.

The researchers have outlined a process of first reducing wood pulp by about a million times in order to produce nanocellulose, freezing it, then transforming the liquid into a gas through freeze-drying, thereby creating what is called an 'aerogel'. The result is a flexible and compressible, porous material that is quite hardy. From this, batteries are produced by coating the entire interior surface area of the aerogel with ink that conducts electricity.