

# The PiSToL News

## Issue 2

September 2016

### Hello waxaa

Good day! Welcome to the second issue. I hope you enjoyed the first. I had feedback about the mouthful of a title (Physical Sciences Testing Laboratories), so I have renamed it to the PiSToL News. A bit easier to say!

### In this feature

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### Steel mesh update from Geoff Hallam

There has recently been much publicity around the 'failure' of steel mesh used to reinforce concrete slabs. Journalists love emotive words like "failure"; the truth is generally more prosaic. As those in laboratory testing know, the numbers they produce may be critically influenced by how samples are taken and exactly how tests are conducted. When these 'failures' were investigated it became apparent that the Standard was not entirely unambiguous. Work is on-going to clarify sampling and test methodologies and this should improve the consistency of results between different laboratories. Accreditation is part of the solution to this technical issue as accreditation assessments confirm understanding and implementation of Standards. A final consultation process is currently under way and the final guidance will be published as a revision to the Building Code B1 Structure Acceptable Solution B1/AS1 and Verification Method B1/VM1.

Technical fixes are generally achievable as a matter of consensus between practitioners. Other issues unearthed following the revelation of apparently sub-standard steel products are not so easy to fix.

Investigations have revealed widespread fraudulent paperwork provided with delivered

products. These include certificates using the names and logos of legitimate, accredited, laboratories when the laboratories in question had never tested the product; certificates from accredited laboratories that had been 'edited' after issue; and legitimate test certificates bundled with product that did not relate to the samples tested.

This is the tip of the iceberg of an increasing problem for purchasers but also for laboratories, accreditation bodies and regulators.

[Thank you to Geoff, IANZ's Technical Development and Regulatory Affairs Manager, for this feature.]

### New Specific Criteria 3: Electrical

Authorised representatives of electrical testing laboratories have been notified of a published update to the Specific Criteria 3 for Electrical Testing laboratories. This supersedes the third edition (2008) and those of you with electrical testing classes (3.xx) on your scopes should download it from our website's [criteria page](#). The document was completely reviewed and an abbreviated amendment table can be found near the front.

### Intro to Mechanical Programme

For those of you who aren't familiar with the Mechanical Laboratory Testing Programme, it encompasses a range of laboratories with wide variation in technologies and industries. Approximately one third of the clients are civil materials laboratories, testing road materials, concrete/cement and soils. Another third test Gas Cylinders; including LPG, SCUBA, Firefighter's Breathing Air and fire extinguisher cylinders.

The remaining third includes a diverse range of laboratories including testing of weathertightness in windows and building facades, metals, plastic and composite materials products, pressure relief valves, timber, armoured glass, safety harnesses and webbing, cyclist helmets, toy safety, leather, textiles, plumbing products,

dangerous goods packaging, credit cards, motorway barriers and non-destructive testing of metal products and welds.

Keith Towl is the Programme Manager, and Paul Nichols and Andrew Skeates are accreditation assessors in the team.

### **Metrology Society of Australasia (MSA)**

Although our metrology and calibration clients are quite familiar with the [MSA](#), some of you in the testing laboratory environment may not have heard of the MSA. From the website: "The MSA is an association of professional metrologists, engineers, scientists, technicians and measurement experts throughout Australia and New Zealand". Members gain access to fora relating to their and others' areas of work, newsletters, invitations to private tours and networking events, and inside information on upcoming conferences and other meetings.

Membership is open to all and the first two weeks are free (then AUD45 per year).

You can watch a summary video from the 2015 Queenstown MSA conference, which also includes other information about the MSA, [here](#).

### **Proficiency testing update**

Proficiency Testing Australia is a provider accredited to ISO/IEC 17043:2010, the international standard for proficiency testing providers.

PTA have a [schedule](#) on their website where you can see what proficiency testing programmes are being offered in particular fields of testing, which may help to fulfil your accreditation requirements in terms of participation in proficiency testing.

Some of the programmes on offer at the moment include:

#### *Mechanical*

- Hardness testing of metal
- Tensile testing of metal
- Charpy impact

#### *Construction materials*

- Particle size distribution/shape/density, bulk density, wet/dry strength
- Bitumen content, density, gradings.

### **Science in the Media**

Recently in a copy of DEMM Engineering and Manufacturing magazine (page 10 in the [July issue](#)) I saw a neat article. Cashmere High School in Christchurch won the Dubai-based Zayed Future Energy Prize (prize pool worth \$100,000) out of 1437 entries from 97 countries! Students at Cashmere High invented the eco-Driver programme aimed at increasing awareness regarding sustainable practices and energy generation. Here's a [video produced by CTV](#) after the prize was won. Well done Cashmere High School students!

### **Fun Bits and Internet Stuff**

- Impact testing... on brains? [A blog post](#) from NIST scientist, Steven Mates.
- For all you cleanroom test technicians (and everyone else, of course!), ever wondered what it's like in a satellite cleanroom? Here's a [YouTube video](#) from Tom Scott.
- An American website, [ISOBudgets](#), explains uncertainty-related terms and concepts (amongst other things). Recently there was a blog post entitled "[Calculating Uncertainty: 10 Terrible Mistakes You Need to Avoid](#)" and I found it interesting. Some of you might like it too, and find it helpful.

### **Nabad gelyo!**



"Pardon the Intrusion": Jaipur, India. By Suresh Easwar. From National Geographic's [Photo of the Day site](#).