

CASTINGS

NEWS & VIEWS

June 2017

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CTNZ Industry Champion Report



Recently CTNZ members were invited to join with the Maintenance Engineering Society for a networking evening at South Auckland Forging (SAFE) premises in Drury. We were treated to some hands on forging and several demonstrations of heat treatment including supper of roast meats and vegetables all done in the heat treatment ovens. There was a large display of items manufactured by

SAFE as well as a range of printed items manufactured by RAM3D in Inconel, Stainless Steel and Titanium. Titanium powder compaction & forging are growing technologies at SAFE. Topical now is the fact that SAFE hot formed the 100mm thick high strength aluminium connection for the Emirates/ Team NZ main dagger boards. The evening was very enjoyable but disappointing that few CTNZ members attended.



Sam Charlwood a writer for Metal Casting Magazine interviewed me recently with questions relative to the industry.

(SC)What are the future needs and capability gaps for the metal casting industry in New Zealand?

(CTNZ)Hard working, well qualified staff, capital investment

(SC)How can New Zealand stay competitive – what needs to be done?

(CTNZ)We need to find niche's where we can compete, we can't compete in high volume low cost castings

(SC)What is New Zealand doing to attract new people to the industry. And specifically, is there still a stigma attached to foundries that they are “old school”?

(CTNZ)Most new people are immigrants attracted to NZ for a better life, very little is done to attract young people and from what I hear young people don't want to work in foundries. I think that the stigma still exists today, rightly or wrongly and this influences them.

(SC)How are the current technologies and foundry techniques evolving?

(CTNZ)Slowly, most if not all development comes from overseas, we are too small here to invest a lot in R & D

(SC)Upcoming trends – the Internet of Things and its impact on the metal casting industry?

(CTNZ)I think it provides opportunity and threat, it brings us closer to the global market and vice versa brings our competitors closer to us.

Bill Lovell

Industry Champion

CTNZ - 2017 Conference

‘Sustainable Foundries – The Future’

Our conference has now rotated again to the South Island and it will be held in Dunedin at the Southern Cross Hotel from the 11th to 13th of August. The theme of the conference is ‘Sustainable Foundries – the Future’ and our keynote speaker, Professor Mark Jolly from UK is an expert in this field.

We have planned an interesting range of speakers and topics based around our guest keynote speaker and our conference theme. Robert Blache, Technology Network Manager- Advanced Manufacturing for Callaghan Innovation will be presenting ‘Additive Manufacturing & Industry 4.0/Smart Factories. Callaghan Innovation is about to open a 3D printing facility in Gracefield and he thought it might be useful to bring some 3D printed casting patterns to add some hands-on experience to the talk. Callaghan could either do a mock-up, or even better, if there was a foundry interested in trialing the technology they could do a more

realistic part. About 200 x 200 x 200 mm max would be a good size to handle. We thought about printing at least 2 copies, so that we could get the casting done and still will be able to show the printed pattern, too.

Timewise, we should aim at identifying the part within the next couple of weeks, so that will give us enough time to verify the design, get both printing and casting done and ship it from A to B to C. Please contact Bill Lovell bill.lovell474@gmail.com or Robert Blache; robert.blache@callaghaninnovation.govt.nz There are many other interesting speakers that are on the program which is now on our website; www.castingtechnologynz.org

‘Industry tour’

The industry tour on Friday afternoon is to Scott Technology in the Kaikorai Valley. Scott specialises in the design and manufacture of automated production, robotics and process machinery. A leading expert in automation & robotic solutions globally that improve productivity, reliability, yield, and safety for manufacturers and processors in industries. Scott Technology is widely recognised, as a world-class builder of advanced automation systems, particularly for the appliance, meat processing, mining and superconductor industries globally.

‘Partners Programme’

The partners who attend the conference are offered an interesting Saturday morning tour of Olveston House followed by morning tea. Olveston House is a time capsule as little has changed inside the house since it was occupied. It is an authentic and original historic home depicting the life of a wealthy merchant family in the early part of the twentieth century.



Socially we always enjoy the Friday night drinks and canapes and the opportunity to catch up with our colleagues in the industry. On Saturday night at our banquet dinner we will be entertained by a group of local jazz musicians.

Casting Technology is most grateful to the excellent support given by our sponsors. Bookings can be made direct by contacting;

Southern Cross hotel, central reservations team 0800 69 69 63 or direct to the hotel 03 477 0752.

Ask to make an accommodation reservation into reference #7497706 or quote the group booking name Casting Technology NZ Inc

Employment - Job Vacancies

There has been seven recent enquiries from people with foundry trade skills wishing to seek employment in New Zealand.

- **Utsav Swadiya**, post grad student in Auckland, has had foundry and metallurgical experience and has a work visa, email; utsav.meta@gmail.com
- **Ritesh Thakur**, experienced Foundry QA and production in Christchurch, email; ritesh.thakur3733@gmail.com
- **Prabhat Ranjan**, an experienced moulder in India email; tayo.prabhat981@gmail.com
- **Herman Olivier**, a Foundry Manager currently in South Africa, email; hermanolivier@southx.co.za
- **Shreekant Sharma** 24 years' experience in metal processing currently in India email; shreekant99@yahoo.com
- **Nirav Dave**, a mechanical engineer currently in Auckland. email; davesnirav@gmail.com
- **Dumisani Mthethwa**, foundry, metallurgy and sales experience from Zimbabwe. Email; mthethwa2016@yandex.com

Members wishing to receive CVs for any of these people please contact; Bill Lovell; bill.lovell474@gmail.com. I would be interested in hearing from any member who successfully employs someone from these applicants.

HERA Awards Nominations

As part of the Metals Industry Conference, HERA celebrates alongside industry associations SCNZ, NASH, NZSSDA, MRM, CTNZ and GANZ to present awards for outstanding achievements by companies and to honour a standout person from the industry.

These are presented at the ever-popular *Metals Industry Awards Gala Dinner*. This year the Conference and Dinner will be held at the Addington Raceway & Events Centre in Christchurch on the 15th September.

What are the Awards;

- Distinguished service to the Industry
- Exporter of the year
- Innovator of the year

Full details of the awards and criteria can be found by following the link; [this nomination letter and form](#).

This is an exciting time to celebrate and acknowledge our colleagues and peers for work well done, but it can only be possible with your nomination of an individual or your company for the appropriate awards. Nominations should be submitted before the 30th July.

Conferences and Events

China Diecasting

Where: Shanghai New Exhibition Center

When: 19th – 21st July

CTNZ National Conference; Sustainable Foundries – the Future

Where: Southern Cross Hotel, Dunedin

When: 11th—13th August 2017

Contact: www.castingtechnologynz.org

Metals NZ Conference

Where: Addington Raceway

When: 15th September

World Foundry Congress

Where: Krakow, Poland

When: 23rd- 27th September

AFI National Conference 2017

Where: Adelaide Oval Function Rooms

When: 27th—29th October 2017

1st Asia-Pacific International Conference on Additive Manufacturing

Where: RMIT Melbourne

When: 4th – 6th December 2017

www.apicam2017.com.au

Competenz Update

At our last meeting with Competenz the question was asked about the progress of the NZ Certificate in Metal Forming Level 4. The unit standards that we can confirm have been published by NZQA and will form part of the metal forming programme of training. This is predominantly the work that was carried out by the 'Common Technical Advisory Group' that your sector was represented on by John Redman and Jon Leadbeater.

There have been several other metal forming technical advisory group meetings that have been specific to your sector. These meetings have reviewed, developed and in some cases suggested the expiry of unit standards. This work is what makes sharing of the whole training programme difficult as we have now reached version 7. We are expecting to have all the review and development work completed by September 2017 so that we can formalise the programme for submission to NZQA. As discussed this submission will only be for the metal casting discipline as there is so much more work to complete around forging and extrusion.

WorksafeNZ Fact Sheet

SILICA DUST IN THE WORKPLACE

At least 600-900 people die each year from work-related disease in New Zealand. Exposure to a form of silica dust – respirable crystalline silica (RCS) – is dangerous and can cause serious lung disease. It is known to contribute to lung cancer.¹

It is important to eliminate RCS from a workplace, or minimise exposure to ensure worker health and safety.

Silica is a natural substance found in concrete, bricks, rocks, stone, sand and clay. Silica dust is created when materials containing silica are cut, ground, drilled or otherwise disturbed. If the silica particles in this dust are of a crystalline structure and are small enough, (known as respirable crystalline silica or RCS), they can be breathed deep into the lungs and cause damage.

The dust that can be breathed in is not always visible to the naked eye.

WHAT ARE PCBUS' RESPONSIBILITIES?

As a person conducting a business or undertaking (PCBU), you must ensure the health and safety of workers, and that others are not put at risk from your work.

You must eliminate risks that arise from your work so far as is reasonably practicable. If you can't eliminate the risk, you must minimise it so far as is reasonably practicable. When deciding the ways (control measures) to eliminate or minimise risks, you must identify when work tasks may create RCS. Give preference to effective control measures that protect multiple workers at the same time.

Talk to workers to get their views on which control measures to use.

TO ELIMINATE RCS

Use alternative products (eg metallic shot, slag products or grit for abrasive blasting, instead of sand).

TO MINIMISE EXPOSURE TO RCS

Wet working suppression methods
Use water and wet working methods to keep RCS out of the air.

Ensure equipment and affected work areas are frequently cleaned with a water hose or vacuum cleaning system with a high-efficiency particulate air (HEPA) filter to protect nearby workers from dust exposure. Don't dry sweep or use compressed air to blow off dust.

Dust control methods

Look for dust control features and dust collection systems when purchasing equipment and machinery. For example, tools used for cutting, grinding or polishing concrete and masonry should provide water to the blade and/or be fitted with on-tool dust extraction.

Ensure other dust generating equipment has a dust collection system with a filtered air supply to isolate the operator from the dust. Remove dust from work areas using vacuum cleaning systems with filters (HEPA filters).

Administrative controls

Set up exclusion zones with signs to mark the boundaries of work areas where RCS is created. These signs should warn your workers about the hazard and specify any personal protective equipment required. Schedule potential high exposure work for breaks or after normal working hours.

Personal protective equipment (PPE)

PPE is the least effective type of control measure and should not be the first or only control measure considered.

The PCBU who direct the carrying out of work must provide PPE to workers unless another PCBU provides it or the worker genuinely and voluntarily chooses to provide their own PPE (and you are satisfied the PPE is suitable).

Respiratory (breathing) protection

Use suitable respirators for protection against the dust. The type of respirator should be carefully chosen. Seek expert advice when choosing PPE.

Provide information, training and instruction so workers correctly use, wear, store and maintain the PPE.

Carry out fit testing for each worker who will wear a respirator that requires a seal against the face.

For further information, see WorkSafe's fact sheet *Respiratory Protective Equipment – Advice for Persons Conducting a Business or Undertaking*.

Protective clothing and cleanliness

Ensure your workers have overalls and gloves to wear at work.

Ensure your workers understand the importance of washing their hands before eating, drinking and smoking, and of washing up before they go home at the end of the day.

Ensure facilities for washing are provided.

EXPOSURE MONITORING

As a PCBU you must, so far as is reasonably practicable, monitor workplace conditions if exposure to a particular health risk warrants it.

Exposure monitoring will confirm whether workers are exposed to the substance at potentially harmful levels, and if existing control measures are working effectively. However, exposure monitoring does not replace the need for control measures to reduce exposure.

Seek your workers' views when making decisions about exposure monitoring.

HEALTH MONITORING

As a PCBU you must, so far as is reasonably practicable, monitor worker health if exposure to a particular health risk warrants it.

Provide ongoing health monitoring for all your workers who may be exposed to silica dust. Monitoring should include lung function testing, and a respiratory questionnaire. Occupational health nurses can provide this service.

Seek your workers' views when making decisions about health monitoring.

TRAINING

As a PCBU, you must so far as is reasonably practicable ensure workers are supervised or trained to work healthily and safely.

Provide your workers with information, training and instruction on the control measures (including the use and care of PPE) and the potential health risks of RCS.

Seek your workers' views when making decisions about how to provide information and training.

FURTHER INFORMATION

For further information (eg about local exhaust ventilation) see the WorkSafe website: www.worksafe.govt.nz

This fact sheet has been developed using guidance from:

Health and Safety Executive (UK)

www.hse.gov.uk

National Institute for Occupational Safety and Health (USA) www.cdc.gov/niosh

WorkCover NSW (AUS) www.workcover

Board Members Email Contacts

Should you have any queries or require assistance, please feel free to contact a Board member.

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