

# Castings

# News & Views

November 2006

## CONTENTS

- CHAIRMAN'S MESSAGE
- 2006 CONFERENCE OVERVIEW
- EXTREME THERMAL ACTIVITY  
CONFERENCE PAPERS CD
- BOARD FOR 2006/2007
- INDUSTRY CHAMPION APPOINTED
- CHINA, TAX, COMPLIANCE COSTS AND  
OUR DWINDLING WORKFORCE
- TRAINING UPDATE
- REGIONAL ROUNDUPS
- BERNIE GILLIES RETIRES
- 2006 CAST METALS INDUSTRY ACHIEVER  
OF THE YEAR AWARD WINNERS
- DATABASE UPDATE

## Chairman's Message

As 2006 draws to an end we can look back at a very busy year for CTNZ. It's one that I'm proud of. There has been a lot of activity with our industrial tour of China, an Australasian Conference, progress towards a coherent training system and a fair amount of branch activity. You can see evidence of activity throughout this newsletter. Having people the caliber of Ralph Bingham visiting members as consultant to our members is tremendous. We can be confident that we are adding more value than cost as an organisation. The Rotorua conference was an outstanding success, especially given the challenging business environment. We have a lot of activity planned for next year and should be able to keep the momentum up with the help of our Metal

Casting Industry Champion, Steve Welburn. Please offer him your enthusiastic support.

We welcome Mark Duxfield onto the Board and thank Darryl May for his participation over the last 2 years.

Sincere thanks go to the team at Business New Zealand, Steve Welburn, NZ Trade and Enterprise and the Board for their efforts this year.

I hope that you all have a very relaxing festive season and a great 2007.

Mike Alston  
Chairman

## 2006 Conference Overview



The 2006 Australasian Foundry Conference was held in Rotorua between 15 and 18 October 2006. Dubbed "Extreme Thermal Activity" the conference name not only reflected the overall theme objective of the conference of working towards the future prosperity of the Australasian cast metals industry but also refers to the geological nature of the location of the event.

The conference venue was the Royal Lakeside Hotel in the heart of Rotorua and delegates staying in the hotel would have been treated to a great view of either the lake or the town itself from their rooms. Over 180 delegates, partners, speakers and trade show exhibitors attended the 3 day event. The trade show itself was very popular with 16 stands in a room adjacent to the main conference theatre.

The conference and trade show was officially opened at the Sunday evening cocktail hour by Mike Alston the Chairman of Casting Technology New Zealand Inc. after being introduced to the assembled delegates by MC Les Johnson.

This year's speaker program was aimed at offering business management inspiration to delegates in the face of declining local manufacturing due to globalisation. The strongly represented business topics were well balanced with technical content updating delegates with the latest technical advances in cast metals technology along with speakers reporting trends in foundry education and training. The star speaker Dr Ian Brooks having reminded delegates that low cost manufacturing countries will remain a permanent feature of our economic future then proceeded to offer advice born of authoritative research on how to become customer driven in order to counter this economic reality. Ralph Bingham showed us the journey to becoming a world-class manufacturer and Doug Harland rounded out the conference with a workshop in which delegates brainstormed how our industry could overcome a number of challenges many of which had been framed by earlier speakers. Doug's report on this session is eagerly awaited and promises to be a powerful document which will provide guidance for industry administrators and policy makers in the near future.

The Monday evening social event was a visit to the Tamaki Maori Village where delegates were able to appreciate a pre-European Maori village and a taste of Maori culture through experiencing the Powhiri (welcome ceremony), a cultural show in the form of Haka (song and dance) and dining on a traditional Hangi meal where food is cooked beneath the ground. Kiaora.



Bernie Gillies performing the Haka at the Monday evening social event at the 2006 conference in Rotorua

The 2006 conference once again celebrated our industry's new talent by hosting the eight winners of the Cast Metals Industry Achiever of the Year Awards. In addition to paid travel and accommodation to the conference donated by their respective states and complementary registration to the conference, each award recipient was presented prizes of a power tool and technical book at the Wednesday night closing banquet.

Banquet speeches also honoured two of the annual convention's long term identities and regular attendees. Bernie Gillies was awarded Honorary membership of Casting Technology New Zealand Inc. and Joan Gillies was presented with flowers. The couple announced that this would be their last conference and received a standing ovation from an emotional assembly as they returned to their seats. The banquet was also stirred by a tribute to the late Allen Vaughan Senior who passed away recently. The conference was closed by the traditional handing over to next years host state Western Australia by Mike Alston to Darcy Hamill.

*The above report was prepared by  
Steven Welburn*

### **Extreme Thermal Activity Proceedings and CD**

We have a number of CD Rom discs available of the proceedings of the 37<sup>th</sup> Australasian Foundry Conference.

Copies of the CD can be obtained at \$25.00 plus GST each by contacting Linda Boland at [lboland@businessnz.org.nz](mailto:lboland@businessnz.org.nz)

One of the papers presented at the conference but was inadvertently omitted from the CD was that by Dr John Taylor, CAST CRC, University of Queensland. This popular and highly recommended technical paper has been included with this newsletter.

### **Board for 2006/2007**

At the AGM the following were elected to the CTNZ Board for 2006/2007:

- Mike Alston – MetCast Services Ltd, Auckland
- Ian Close – Cast Shop Ltd, Christchurch

- Mark Duxfield – Wade Engineering, Auckland
- Warwick Fyfe – Mace Engineering, Christchurch
- Tony Knight – A&G Price Ltd, Thames

Mike Alston continues as Chairman until the first Board meeting after the AGM when it is the duty of the Board to elect the Chairman for the coming year.

If you have any queries or require assistance, please feel free to contact a Board member in your region.

### 2006 Annual Report

For members who did not attend the AGM, attached is a copy of Mike Alston's 2006 Annual Report.

### 2006 AGM Minutes

A copy of these are attached for your information.

## Industry Champion appointed

Steven Welburn has recently been contracted by the CTNZ Board under paragraph 8 of the Constitution in the role of Metal Casting Industry Champion.

Steven is a past CTNZ Chairman and has formal qualifications in Cast Metals Engineering backed up by over 30 years experience in the metal casting industry.

Steven's work in the Industry Champion role has already become visible as the organiser of the visit to New Zealand of Ralph Bingham and in coordinating the assembly of the technical program for the 2006 conference. In appointing this role the Board has the objective of facilitating the continuation of the greater level of activity seen this year into the near future.

You are encouraged to contact Steven with any metal casting industry related concerns by phoning him on 027 2278 886 (027 cast tum ☺) or email [swelburn@xtra.co.nz](mailto:swelburn@xtra.co.nz)

## China, Tax, Compliance Costs and Our Dwindling Workforce

Rotorua was recently the venue for the 37<sup>th</sup> Australasian foundry conference. As a "first

timer" to one of these I was very impressed with the friendly atmosphere and the willingness of everybody there to share thoughts and ideas. I also found the calibre of the technical papers and invited guest speakers to be very high.

And of course we can't forget about the suppliers that trapped us in the bar until early hours of the morning, again and again! I am sure a few trade secrets might of been uncovered by means of amber lubrication, however not many would have been remembered the next morning!

To complement the technical papers were discussion topics presented by high calibre invited guest speakers, the first of which was Phil O'Reilly, Chief Executive of Business New Zealand, with his enlightening opening address: THE CURRENT BUSINESS AND POLITICAL ENVIRONMENT. Phil's challenging presentation brought home some thought provoking issues including some alarming comparisons against our Aussie counterparts. Some of his presentation notes are included in this editorial.

Another outstanding guest speaker was Dr Ian Brooks. His presentation "HOW TO COMPETE IN A CHALLENGING MARKET" was to me the most compelling presentation of the whole conference. One comment from a delegate after his session was "*If for nothing else, for me that presentation has made this whole conference pay for itself*". WOW! And yes I would probably agree that Dr Brooks' thoughts on Customer **Driven** Organisations are what all New Zealand businesses should be considering if they think that they wish to truly succeed, and stand the test of time in such a competitive environment. To learn more about this and other topics by Dr Ian Brooks, go to: [www.ianbrooks.com](http://www.ianbrooks.com)

Out of the conference some of the general discussion and sentiments included the following comments and ideas that are of no particular origin, but are a general interpretation of what was said over three days.

I would guess that all of the above title topics mean something to every engineering &/or manufacturing business in New Zealand. The foundry industry deals with greater variability in manufacture than any other industry I can think of, and at every turn is getting threatened by government policies and the general lack of interest in manufacturing in New Zealand.

Whether you are a business owner or employee, these issues affect YOU.

- **China**

Don't think for a moment that the cheap exploited labour markets of China, India, South America, to name a few are going to let up. GET OVER IT! Learn to adapt, learn to be smarter and learn to protect your IP. New Zealand manufacturing as a whole needs to learn to work smarter, not harder. But it is much harder, to work smart. We need to work at delivering and demanding high levels of operational excellence<sup>1</sup>. An example of *not* working smart is we have a situation in New Zealand where we are struggling to supply enough electricity to satisfy demand, yet we export a natural resource coal (so we don't burn it in NZ) to China to encourage them to compete with New Zealand manufacturers. Last time I heard it was "Global" warming! We also export our scrap steel and other raw materials to be sold back to us against the industries that generate the scrap in the first place. So eventually we may all loose when the local manufacturers close, the scrap ceases to be generated, and the scrap is no longer available to export. LOSE – LOSE. On the one hand we complain about cheap imports crippling our local manufacturing industry, but on the other hand we encourage it by exporting raw materials, and celebrate it by buying cheaper equipment and consumer goods for home.

So we do need to embrace the China phenomenon and find ways to continue in the face of it, and make it work to our advantage. Does a top sportsperson say, "Oh to win is too hard, I will just give up"? No, they say "Just do it, go hard!"

- **Tax**

Touchy topic. Facts GDP Growth NZ 1.9% Aust 2.3%. Av Wage NZ NZD\$46k Aust AUD\$54k. interest rates NZ 7.25% Aust 6%. Net Migration to Australia 20,000 per year.<sup>2</sup>

New Zealand has an \$11.5 billion surplus, which is 6% of our GDP. This is the second highest in the OECD. Australian surplus is 2% of GDP

<sup>1</sup> David Penny NZTE

<sup>2</sup> Phil O'Reilly, Chief Executive Business NZ

Make up your own minds. Manufacturing as a whole is hurting in NZ and the foundry industry is no different. As an industry we have need to work together for the common good, work smart, work well. Some of that surplus would be good to!

- **Compliance Costs**

Yes we all know about the costs of being in business in New Zealand are high compared to other countries. ACC, OH&S, Resource Consents, employment costs. All of these are viewed as essential to exist. Those of you who are in business ownership or management will understand this topic well. At every turn of our operations we are crippled with some sort of compliance cost that we have to incur for some reason or another, that we consider to be a rip off. These costs are not going to go away in a hurry but we must make our voice heard. It is no good for us to complain to each other, because that won't get heard in Wellington. Further on in my conclusion I offer some ideas on how we can approach some of these issues.

- **Dwindling Workforce**

In NZ we know that to employ someone to fill a gap in our workplace, the most likely source of a new employee will be from a competitor. That does not do any good for manufacturing in New Zealand. As a country we are not renewing our own generations to keep up with growth demands. Unfortunately the only two options remaining to us are to import skills from overseas, or to attract school leavers.

So what are your perceptions of a foundry? Dirty, smelly, noisy, dangerous, low skilled? To some extent you may be right, but old perceptions are difficult to loose, whether they are correct or not. Do the youth of today worry about noise and danger while the boom box in their fast, modified car shakes their kidneys with irreparable damage while drag racing in some back street in Manukau?

The truth of the foundry industry is that it is an industry with a long history that employees school leavers to university graduates from around the world. It is an industry that utilises high tech computer simulation software and requires intense training and experience to identify, analyse, prevent failures and defects. The industry has more issues and variants to deal with on a daily basis than any other

industry I can think of. That takes skill and experience.

## CONCLUSIONS

Some common conclusions from the 37<sup>th</sup> Australasian Foundry Conference in Rotorua could be summed up from David Penny's presentation:

1. There is a requirement for a Minister in Manufacturing to voice our issues in parliament.
2. Requirement for improved economic information about manufacturing (benchmarking possibly?)
3. We need to collaboratively celebrate manufacturing success (politicians, press media, trade associations, unions etc)
4. Endorse calls for radically improved infrastructure (broadband, road, logistics)
5. R&D, Depreciation, amortisation incl patents, thresholds, accelerated write-offs
6. Reduced compliance costs
7. Taxation policy equivalence with Australia (as a start) where it makes a competitive difference

We are a nation with the good old # 8 wire can do and fix anything attitude. However we are not that good a nation at working together in manufacturing. Collaboration and unity will set New Zealand up well for continued success in manufacturing, with our high quality, adaptable nature that is easy to deal with, we will continue to provide world class products to the domestic and international markets.

What can we do? Well I started by writing this editorial that will hopefully get people talking about it. Whether you agree or disagree, if you talk about it, I achieved the desired result. From here is up to all of us to continue the rumble, which hopefully will gain momentum.

*The above letter to the editor was prepared by  
Mark Duxfield – CTNZ Board Member*

## Training Update

### Competenz Qualifications Update

Timed for release later this year, the reviewed National Certificate in Metal Casting (Technology) Level 4 qualification will bring about flexibility of selecting the unit standards that are highly relative to the industry whether it be sand casting, die casting, investment casting

or engaged only in pattern making only for the metal casting industries.

To help promote the implementation of this qualification in the industry, a series of other collaterals such as assessment guides, apprentice manual and promotional brochure are in its final stage of development.

At the recent 37th Australasian Foundry Conference held in Rotorua, Sriyani Warusavithana, Qualifications Manager of Competenz presented this information on behalf of the Industry Leadership Manager, Jennis Lawrence.

She also highlighted the fact that the reviewed qualification forms a pathway for those who complete the National Certificate in Mechanical Engineering (Level 2) to specialise in Metal Casting and leads to other Mechanical Engineering qualifications at levels 5 and 6. This keeps in line with the NZQA's policy of having a seamless education pathway.

The input from the Metal Casting industries and CTNZ to the review of the qualification and unit standards was greatly acknowledged and Competenz is looking forward to work very closely with CTNZ to increase the training initiatives of the Metal Casting industry sector.

*The above report was prepared by  
Sriyani Warusavithana of Competenz*

## Regional Roundup

### Northern

We have held two evening technical meetings since the last newsletter with 22 people attending the 10 October meeting at which Ralph Bingham presented his overview of Lean Manufacturing as applied to the cast metals industry. This was a well received talk from a speaker who has had the opportunity to apply these world beating methodologies in a number of world class organisations in Europe and the US. This was followed up by a double presentation on 14 November where Darrel Wong of NZTE overviewed the work of the New Zealand government's economic development vehicle that is NZTE followed by Mike Alston who presented his report of the CTNZ industrial tour of China which took place in April this year.

Mike concluded his report on China by presenting his thoughts on how the New

Zealand cast metals industry might address the challenge of competing with the Chinese juggernaut. Taking inspiration from speakers at the recent foundry conference and quoting the assistance available from such agencies as NZTE he suggested we could compete internationally by combining our individual organisation's strengths. Perhaps by pursuing high value niche markets and clustering into synergistic groups. We could look at the successful New Zealand Tool & Die cluster model and consider the advantages and disadvantages of the Metals Institute of New Zealand concept.

The northern region acknowledges the support of HERA who donate the venue for these meetings.

*The above report was prepared by  
Steven Welburn*

### **Canterbury**

On Thursday 19 October 13 Canterbury members met at Mace Engineering for an evening with Ralph Bingham.

Ralph, who had just presented his paper at the Australasian Foundry Conference, gave an overview of "Lean Manufacturing" which was well received by all who attended.

We are grateful to NZ Trade & Enterprise for their assistance with bringing Ralph to New Zealand and Mace Engineering for making their facilities available for the meeting.

*The above report was prepared by  
Ian Close*

### **Otago**

Toll NZ Hillside Engineering hosted the final meeting of Ralph Bingham's tour of New Zealand. 31 people attended the Halloween Night talk where Ralph overviewed the principles and methodologies incorporated in Lean Manufacturing. Ralph Bingham visiting from England has a local connection with Dunedin where his brother-in-law is a professor at Otago University. The meeting showed great support for more such events in the region.

*The above report was prepared by  
Steven Welburn*

### **Bernie Gillies Retires**



Bernie and Joan Gillies receiving gifts from CTNZ Chairman - Mike Alston at the 2006 Australasian Foundry Conference Gala Dinner

It was a very emotional standing ovation that accompanied Bernie and Joan Gillies back to their seats at the banquet dinner at this year's Australasian Foundry Conference. The ovation came after their being honoured in a speech and presented gifts by CTNZ chairman Mike Alston during the gala dinner. Bernie was also awarded Honorary membership of Casting Technology New Zealand in respect of his service to the New Zealand foundry industry. During the speeches the couple announced that after Bernie's recent retirement from the industry this would be their last Australasian convention.

Bernie is the last of the three musketeers of the Australasian Foundry Convention circuit including the late Alan Hepworth ex Manager of the Johns Valves Foundry and the Eureka Valves Foundry and the late Allen Vaughan Snr. founder of Vaughan Castings who received his own tribute at the Rotorua conference dinner. In a recent interview Bernie recalls this was the 23<sup>rd</sup> convention he had attended beginning in 1975 when he attended the Christchurch conference. After that he and Joan were on the organising committee of the

1981 conference in Queenstown which he still remembers as up there with the best ever including the likes of Stephen I Karsay on the speakers list.

Bernie became involved with foundries almost immediately he began his working life. When his father bought the North Otago Engineering Company in 1943 it was the foundry part of the business that inspired Bernie. After beginning an engineering course at Otago University however it was not long before he was struck by the need to travel. He worked his passage to England as a refrigeration greaser on a Cargo Passenger vessel a journey that took about 6 weeks in those days and once he arrived in the UK began touring foundries there. Bernie remembers the dirty and very basic operations he repeatedly came across especially in and around Birmingham during a stint as a sales rep with the Stone Wallwork moulding machine company.

When GT Gillies took over the North Otago Engineering Company the foundry part was very much the vision of the back street foundry. It had an old boiler that had been converted into a small cupola and also a Tubalette (forgive me if I have the spelling wrong but I believe it is a furnace essentially made out of a 200kg drum). They used coke from the local gas works which was so poor quality it provided for an abysmal charge to coke ratio. In those days they made parts for refurbishing 100mm reflux valves but as time went by the company went into pumps and were the first to get into space heaters. Bernie points out a couple of philosophies that they learned as an organisation from even those early days. That the organisation needed to stay flexible and that the vast majority of what the foundry made should be for their own product lines. This philosophy was still evident during the writer's recent visit to the Tyne Street workshops.

Bernie remembers that during the second world war labour became an issue as the engineering works lost 50% of the staff to the war effort. But remarkably says Bernie they all came back.

The money came to develop the foundry and the rest of the company after GT Gillies' garage business won the tender to purchase the Pacific Battle Zone surplus vehicles after the second world war in 1946. They acquired some 1225 GMC trucks and 500 jeeps the proceeds from which provided the economic base from which to move forward. The foundry was also

subsequently occupied in producing replacement parts in the form of inlet and exhaust manifolds and winch parts. In fact Bernie explains they sold the last of the GMC trucks just before last Christmas.

In those early days much of the labour was by hand and Bernie remembers the expansion of the business where the foundations of some of the buildings were excavated with pick and shovel. He also remembers the time they brought 500 tonnes of pig iron into the wharf at Oamaru and had to unload it one ingot at a time by hand into trucks and then on to the foundry. Today we are concerned about the company tax rate at 33% well he remembers it at 66%. Conversely there was an embargo on the export of scrap steel and copper, how times change. He also had to have a licence to import the coke, pig and ferroalloys.

In the late 1970's the company went into ductile iron, facilitated by investment into electric melting and a spectrometer. In those days all took some part in the business and Joan remembers being trained as the back up Spectrometer operator. In fact at many a conference after that she would remember being personally targeted by the instrument sales professionals who knew of her personal involvement each looking to get the organisation to upgrade. The talk of ductile iron brings forth another accolade that Bernie has received from his peers where in 2002 conference Bernie was honoured with a Foundry Industry Citation Award from the Ductile Iron Producers Association.

Bernie has noticed many changes in the foundry industry over the years particularly the advancement in technology and the technology incorporated in the consumables now available to the foundryman. The other changes he has seen are in management approach and the move from viewing the craft from being a black art more towards an engineering discipline. He has also seen the introduction of materials like ductile iron that produced a quantum leap in materials properties available for the cost/weight and notes that these materials shifts are still occurring with the introduction of Austempered Ductile Iron. He reminds us that metal castings are still incorporated into just about every aspect of our everyday lives and will continue to do so and as an industry this is still the challenge to remind the public of this fact. Finally he urges the industry to adopt the general name change away from "foundry" and

reinforcing the use of the term “cast metals industry” to shift perceptions from a black art to an engineering discipline.

We all wish Bernie a long and happy retirement and thank him for his contribution to the cast metals industry in New Zealand and further a field and finally wish both Bernie and Joan many years of good health.

*The above interview was prepared by  
Steven Welburn*

### **2006 Cast Metals Industry Achiever of the Year Awards Winners**

The 2006 Cast Metals Industry Achiever of the Years Awards presentation ceremony was held at the 2006 Australasian Foundry Conference in Rotorua during October. Eight winners representing New Zealand and the individual states of Australia were honoured in the speeches at the Gala Dinner at the conclusion of the conference.

New Zealand winner Justin Barnes of Mace Engineering, Christchurch earned his placed by submitting a power point presentation detailing the technical aspects of a particularly challenging mould and casting he had completed during his apprenticeship.



Cast Metals Industry Achiever of the Year Award winners at the 2006 Australasian Foundry Conference

Alongside Justin the other winners proudly exhibited their achievements on a booth at the trade show and were given the opportunity to benefit from their attendance by network opportunities with speakers and delegates. The achievers were also treated to a works visit to A & G Price foundry and engineering works in Thames.

In addition to paid travel and accommodation to the conference donated by their respective states organisations (AFI and CTNZ) and complementary registration to the conference assisted by MetCast Services Limited and Competenz, each award recipient was presented prizes of a power tool donated by Fein Australasia Pty Ltd and the Foseco Foundrymans Handbook book donated by Foseco at the Wednesday night closing banquet.

*The above report was prepared by  
Steven Welburn*

### **New Member**

CTNZInc is pleased to welcome Glucina Alloys as a new member.

### **Membership Update**

In 2007 NZ Post requires all postal addresses to include new post codes. Therefore to ensure we have your correct contact details on our database, please complete and return the attached fax back form.

### **Metal Casting Technologies Magazine**

If you wish to receive the “Metal Technologies Magazine” in 2007, please indicate this on the fax back form attached.

*Please Note: The annual subscription to this quarterly magazine is \$65 + GST. Subscription invoices will be sent out with the first issue in March.*

### **Christmas Closure**

Please note that the offices of the secretariat (Business New Zealand) will be closed from December 22 until January 8 however I will not be back in the office until the 15th.

On behalf of the Board of CTNZ I would like to take this opportunity of wishing you all a happy and safe festive season and a prosperous 2007.

Linda Boland  
Executive Assistant



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