

news



TOMAGO TALKS
**TALENTED
APPRENTICES**

**SUPPLIER AWARDS
RECEIVE STRONG PRAISE**

**IoT TAKING
ON THE WORLD**

**MO BROS MAKE A
MOVE IN MOVEMBER**

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CEO MESSAGE



MATT HOWELL – CHIEF EXECUTIVE OFFICER

“WHAT MIGHT SEEM IMPOSSIBLE AND UNLIKELY TO ACHIEVE, BUT WOULD MAKE A BIG DIFFERENCE IF WE DID IT?”

It’s a question doing the rounds at TAC as we face the reality of a new energy contract kicking in from November 1. The new contract runs until late 2028 at pretty much a fixed rate, but well over a hundred million dollars more in annual cost. Since we can’t pass this cost on to our customers (the LME sets the price for aluminium on a daily basis), we simply have to absorb it and find other means to increase volumes, reduce costs and avoid loss and waste. I take my hat off to the vast number of people in our business who continue to find ways to do things quicker, simpler and cheaper. Our future lies in our own hands and we have a very bright future if we continue to work together.

We’ve made enormous progress on our automation and job redesign projects, from auto anode gauging, K10 robotic anode cleaning and ingot chain automation to name a few. Many long serving colleagues have taken

the opportunity for voluntary redundancy – which is good for them as they get to leave early with an incentive and it’s good for the remainder of us because our cost base is lower. We’re also acting to improve the nature of the work we do, either by minimising exposure to heat or removing or automating the repetitive and low-skill tasks.

Our performance this year has again been very commendable. At the time of writing we have had two recordable injuries and had notched up the impressive milestone of over a million work hours without a recordable injury. This is testament to the Mates looking after Mates mind-set we are embracing. On the production front, we are on track to beat last year’s record and the quality is a stand-out, with iron in all 3 potlines below 900ppm. This is how we stay in business; deliver outstanding quality, in full, on time.

Recently we had a very successful 12th annual Supplier Awards function, where we celebrate and recognise the best of the best in our supplier and service providers. Despite the rising costs facing the business, we are proud to continue to support the many small (and some large)

businesses that are vital to our ongoing success. We received a huge number of thank you notes from attendees – many simply noting that in the current climate, there are very few businesses that take the time to thank their suppliers in this way. The highlight of the evening was the presentation of the EHS Award to Fives Services Newcastle for their terrific service and safe work practices at all hours of the day and night – congratulations Ian Elliott and the team! We have also had a very active year of continued charity support, with in excess of \$50,000 to a variety of deserving causes such as Westpac Helicopter Rescue Service, Variety, Mark Hughes Foundation, Hunter Defence Support Network and Hunter Medical Research Institute, as well as dozens of employee’s family members for sporting and representative teams.

By now you will have received your summer care package (including a cooler bag, sun cream, ice brick and information about the importance of staying hydrated at work during the Summer months). We recognise our people go through some pretty intense times, particularly at the height of summer and we are doing everything we can to minimise the impact. The

bottled water fridge at the front of the change house is now fully stocked and back in action. Last year we supplied over 63,000 bottles of water and we will continue to provide this free service now the warmer months are upon us.

Let me take this opportunity to thank everyone for their ongoing commitment and hard work over the past 12 months. On behalf of the site Management Team, I wish everyone a safe and happy Christmas with their families; we trust you enjoy the ham and Christmas puddings! I would also ask that everyone spare a thought for those working around the clock on shift work when most of us are enjoying some time off – our business couldn’t survive without you! Frank and his team at the Food Pad are preparing lashings of traditional tucker for the 25th.

Have a safe holiday period and I look forward to making 2018 another very successful year!

Best regards,
Matt

Do you have an interesting story to tell? If you have a suggestion for TAC News please contact Katie Burns at katie.burns@tomago.com.au

TOMAGO TALKS TALENTED APPRENTICES

FOR MOST OF US, TOMAGO'S
APPRENTICES ARE JUST THAT
— TOMAGO ALUMINIUM'S
APPRENTICES.



Our apprentices hard at work practicing their skills including welding and electrical work.

WHAT FEW OF US DON'T KNOW IS JUST HOW DIFFICULT IT IS TO GET ONE OF THOSE APPRENTICESHIPS, AND HOW LUCKY A CANDIDATE IS TO BE ACCEPTED INTO THE COMPANY'S APPRENTICESHIP PROGRAM.

Apprentice Training Supervisor, Greg Wall, recently explained how the program works and if you thought picking the winning Lotto numbers was difficult, try getting one of the seven apprenticeships offered each year.

"We have apprenticeships for Mechanical, Electrical and Plant Mechanic trades," Greg said, "and we go through a fairly rigorous process to choose the right people."

"For those seven positions we generally average about 300 applicants and the standard of candidates is very high."

"We advertise the positions in June and after the application period has closed we start a culling process. Those that make it past that point are invited in for aptitude testing and then we have another culling process. After that we conduct interviews and from there we choose our final seven."

The new employees start their four-year apprenticeships at the beginning of the year and it is an accelerated learning curve.

Their first year is spent in the Apprentice Training Workshop and for the first three months they learn how to use basic tools, manual and power tools, before breaking into their individual skill groups for six weeks for basic machining and basic electrical knowledge.

Another six-week block has them learning more tool skills – oxy and acetylene welding, brazing, cutting, electric arc and MIG skills. Then they go back into their skills groups for a six-week block with electrical apprentices learning the basics of electric motors, motor controls and the like and mechanical apprentices learning power transmission basics including bearing principles, drives and lubrication.

"By the middle of their first year they are ready to take on some small plant jobs in the workshop before they start ramping-up for the end of the year. Basic hydraulics and pneumatics maintenance, reading and understanding schematics and plans, that kind of thing."

"That pretty well rounds them off and for the rest of the year they take-on work projects, which give them a chance to consolidate their skills," Greg added.

While all that is going on, the apprentices have one day each week at TAFE.

From the start of their second year the apprentices get out of the workshop to go on-site, rotating through various locations for between three and nine months. By the time they are fully qualified tradespeople they know the workings of the entire site.

Final-year apprentices, if they have met certain training criteria, can apply for one day off each week to do additional studies within their field of expertise, the company contributes to their training and text book costs.

At the end of four years the program has rolled-out a select group of highly skilled and extremely well-qualified tradespeople and, not surprisingly, the company is happy to keep them in-house.

"Our apprentice retention rate is around 60 per cent," says Greg, "and of those that do leave, 99 per cent of the time they have good jobs to go to."

The best part for Greg? "We're a pretty close bunch and I get to train some really talented people and that's something I really enjoy, knowing I have played a part in their futures, whether they continue in the trade or pursue further career opportunities."



COMING TOGETHER TO
INCREASE
 PRODUCTIVITY



FOR ROD TAYLOR, IT ALWAYS COMES DOWN TO THE NUMBERS AND HOW TO SHARE A FINITE NUMBER OF PEOPLE ACROSS THE ROD SHOP, THE BAKE OVENS AND THE PASTE PLANT TO MEET PRIORITIES.

“The problem is that with the Paste Plant we need a minimum number of green anodes at any given time,” he said. “We need to maintain a safety stock of green anodes to keep up supply to the Bake Ovens.”

Rod, the Carbon Maintenance Superintendent, has a target safety stock level of 5000 green anodes (1.4-tonne blocks of unbaked carbon) at any given time to meet maintenance outages and says achieving that figure is all about maintaining the right supply of anodes into the Bake Ovens.

“Potlines consume more than 600 anodes daily and the ovens can only bake around 620, so catch-up capacity is very low. A reliable supply from the Paste Plant is essential so that we don’t impact on the Bake Ovens,” he said.

Currently, the green anode stock level is being maintained at around 5000 and theoretically at least, the Paste Plant capacity can allow the stockpile to increase by 1000 units weekly.

Rod and his team have taken a different approach to the maintenance schedules for the Paste Plants, putting in place a single shutdown every three weeks, moving more people into key areas to effectively do three days of work in one day and cutting the routine downtime from 48 hours to 24 hours every three weeks.

To achieve that, Rod brings in trades from the Bake Ovens, Rod Shop and from across the site. Contractors also play a key role in completing the right level of work.

“It’s complicated, there are people challenges in it and it means prioritising the work but we’ve now done three big ‘shuts’ and they were all successful. There are still many problems to resolve but the benefit is substantial and well worth the effort,” he added.

The change means the Carbon team has three weeks rather than one to plan their outage so preparation time will improve. As a result, stock levels are up.

“The real value is in the stock level and the reduction of risk to the business. When we have good stock levels we have a much higher level of confidence.”

THE MARKET HAS NOTICED

CUSTOMERS WHO ONCE DECLINED TO BUY PRODUCT FROM TOMAGO ALUMINIUM ARE NOW LINING-UP FOR IT FOLLOWING IMPROVEMENTS AT THE SITE.

What has brought about that change in attitude? Potline operations have been focussed on doing things right the first time.

The quality of the upfront work for anode change, cover, recover and taphole cover are key drivers for low iron in metal and quality measurements that reduce variation, combined with quality anodes and repeatable plant wide drumbeat, complete the picture.

Recently, Henning Flaig, head of Asian Commercial Operations for Hydro, visited Tomago to discuss the improvements that have been made at the smelter and acknowledged the changes that had been made to reduce and control the iron (Fe) levels in the ingots.

Describing the improvements as “significant”, Mr Flaig said that, previously, the high Fe levels and

variations in the Fe levels between 0.12 and 0.20 meant ingots produced at Tomago were unwanted by a significant number of customers.

“In our experience, several years ago, customers were shutting us out of negotiations when we were bringing Tomago ingots to the table,” he said.

Tomago’s recent turnaround has brought about a corresponding turnaround in customer attitude, with the smelter now enjoying a reputation for consistently making and supplying low Fe ingots thanks to much better Fe control.

In fact the same customers who were once refusing to buy Tomago product are now asking for it, such is the increase in metal purity.

Yes, the market really has noticed the changes at Tomago.

SUPPLIER AWARDS

RECEIVE STRONG PRAISE

THE KEY TO A SUCCESSFUL BUSINESS IS A STRONG SUPPLY CHAIN AND IN EARLY NOVEMBER WE PAID TRIBUTE TO OUR PROVIDERS AT THE ANNUAL TOMAGO ALUMINIUM SUPPLIER AWARDS.



Ian Elliott (left) from Five Newcastle receiving his award for Environment, Health and Safety from Simon Mitchell.

Now in their 12th year, the awards recognise the efforts put in by our suppliers, who operate across a broad spectrum to keep Tomago Aluminium operating.

Such is the importance of the awards that supply company representatives travel great distances to celebrate with us. Once again Morten Simonsen, from Danish company Simonsen Denmark, flew in for the awards, as did KBM Affilips' Tom Sanders, who made the trip from The Netherlands and My Lu Yantao, from JSHC China.

In his welcome speech, Tomago Aluminium CEO Matt Howell spoke of the importance of recognising the great input from the supplier base and the need to work together in collaboration, especially with the ongoing focus on Tomago's transformation.

He also gave a timely update on the topic of 'Energy', which is not only very much in the news but also crucial to TAC.

As well, several guests came from interstate to be part of the very special event, held at the Hexham Bowling Club, and recognise the efforts of first-time winners Instrocal (Materials Tier 3), MCM Manufacturing (Services Tier 2) and JSHC (Raw Materials).

The award recognised as the 'jewel in the crown', the coveted Environment, Health and Safety Award, this year went to local company Fives Newcastle, which also previously won the award in 2013.

Speaking about the awards Procurement Manager, Gordon Wilson, said Hexham Bowling Club continues to be a winner, with everyone enjoying the atmosphere, locality, hospitality, service and entertainment.

"Music was provided by The Splinter Band with our own Tony Camps opening the night with a performance channelling Johnny Cash. We were also treated to entertainment by South African-born Kiwi comedian, Urzila Carlson."

Our 2017 Award Winners with Matt Howell (top left) and Steve McIntyre (far right).



WHAT OUR SUPPLIERS SAID...

It is an honour to be selected for nomination, let alone win an award. To have been recognised for the service and safe work practices the team delivers is a terrific motivator and reflects the attitude and safe work practices of the whole team. It shows that their hard work and efforts throughout the year, at all hours of the day and night, does not go unnoticed.

Ian Elliott, Five Services Newcastle

The Supplier Awards night is a great encouragement to K&R Hydraulics because it clearly demonstrates that we are valued and, in spite of the many challenges we all face in business, that there is real commitment for excellence in business-to-business partnership from TAC. We were particularly proud to be nominated for three categories and finalists in three.

Allen Thorpe, K&R Hydraulics

Such positive feedback from one of our most valued customers certainly means a lot and is well appreciated. Regardless of who wins, the general 'vibe' at our table was simply: 'a sincere thanks to Tomago Aluminium for hosting such an event'. In today's market, where everyone is trying to save on costs and minimise spending, it says a lot about Tomago Aluminium for still running such events.

Greg Tait, MCM Manufacturing



AWARD WINNERS

ON-SITE SERVICES (TIER 1, 2, 3)

- Downer Group (1)
- MCM Manufacturing (2)
- Bureau Veritas (2)

OFF-SITE SERVICES

- All Engineering Services

MATERIALS (TIER 1, 2, 3)

- Lear and Smith (1)
- K&R Hydraulics (2)
- Instrocal (3)

RAW MATERIALS

- JSHC – China

CI/VALUE ADD

- All Engineering Services

ENVIRONMENT, HEALTH AND SAFETY

- Fives Newcastle

Corey Lundy pictured completing the final quality check before shipping ingots.



TWO DECADES OF SAFETY RECOGNISED

IT GOES WITHOUT SAYING THAT, AT TOMAGO ALUMINIUM, WE WORK HARD TO ACHIEVE THE HIGHEST STANDARDS POSSIBLE IN EVERYTHING WE DO.

When that standard is a formal one with international recognition, however, it becomes a case of not just doing your best but actually maintaining world's best practice.

Tomago's Casthouse earned its International Standards Organisation (ISO) accreditation 21 years ago and has proudly maintained it ever since, taking pride in the global certification that shows both customers and rivals that the company consistently delivers quality product.

Back in 1996 the Casthouse became one of a select group to achieve ISO certification at its first attempt, the bid led by then-Quality Systems and Development Metallurgist, Phil Callender.

There were four key steps to attaining certification. The first was a manual outlining the Casthouse's quality policies and process control, the second documented procedures covering 20 management elements, the third was a set of work instructions detailing each specific production activity and the fourth was a record-keeping procedure, reference material containing information about operating standards, work codes and practices.

In that 21 year period the International Standard has been revised three times and Cast Products has improved to meet the new Standard each time, this year moving to ISO 9001:2015.

The Quality Management System has also undergone several reviews and assessments to ensure it conforms to the new requirements as part of the transition process.

Michelle Arnouth, Administrative Assistant for Cast Products, says the team is always looking at the processes it has in the business to see how things can be done better.

"The certification process is external and we have a series of areas we need to identify to ensure we are managing it properly."

Certification is a lengthy business. Every year auditors come in and spend three days checking that all the processes are in place. Every three years that becomes a four-day visit for full recertification.

The audit covers the production process from start to finish, 10 steps in all from primary material handling to final shipping documentation, each one needing quality checking.

"There are a series of areas we need to identify and ensure we are managing each one properly. We manufacture and ship 590,000 tonnes of aluminium a year and our goal is to have zero defects. Documentation has to be accurate, correctly signed-off and kept for reference. We self-audit to check our processes and procedures."

It is, says Michelle, an ongoing process and the focus for the coming year is to encourage everyone to understand not only who the customers are but how the product quality can be improved to pass on to those customers.



LOOKING AFTER THE ENVIRONMENT

THE ENVIRONMENT IS SOMETHING WE HEAR ABOUT ON A REGULAR BASIS BUT SOMETIMES THE IMPACT WE HAVE ON IT IS HARD TO UNDERSTAND.

Gus Brown collecting and checking samples from around the Tomago Aluminium plant.

That is definitely not the case for Superintendent Neil Roser and the small team charged with monitoring Tomago's impact on the local surrounds, ensuring the smelter meets the specific requirements of its license.

The state's Environmental Protection Agency (EPA) requires monthly data, which means attacking the issue in a number of different ways.

Continuous point-source monitoring, for example, is carried-out at each stack and backed-up by specific monthly tests.

As well, the five-strong team conducts ambient air monitoring at a number of sites outside Tomago Aluminium's boundaries, with the furthest at Woodberry, about six kilometres away as the crow flies.

The external monitoring program also includes regular assessment of native vegetation, surface water and groundwater with collected data compared to guidelines and matched to historical results, ensuring that any impact is managed and action taken if needed.

The environmental team also manages the on-site sewage treatment plant with treated effluent used in designated areas around the site for irrigation.

The team has been monitoring the smelter since it was first established but, says Neil, the last five or six years have become "more interesting" as production has increased and community expectations have changed.

So how is Tomago Aluminium doing when it comes to the environmental scorecard?

"Not too bad," says Neil. "Our emissions performance is actually improving over time, which is really pleasing and we have no historical storage of spent potlining, which is a hazardous waste and a key environmental issue for many aluminium smelters around the world."



Checking samples in the Tomago laboratory.



Gus Brown collecting and checking samples from around the Tomago Aluminium plant.



Staff enjoyed a free lunch after the clean-up as a thank you for all their hard work.

PUTTING THE SPRING INTO SPRING CLEANING



SOMETIMES YOU WONDER WHY YOUR WORK AREA JUST WON'T CLEAN ITSELF. AFTER ALL, IT SEEMED LIKE IT MADE ITSELF DIRTY.

The annoying thing is it really won't clean itself and after about a year, when you can't fit another sheet of paper in a tray and you can't bear to keep looking at a growing pile of junk, it's time to think about making everything look nice again.

For those of us who think that a clean work area is the sign of a cluttered mind the reality is that a clean work place is a safe and efficient one so, on the morning of October 12, we set aside some time to break out the cleaning cloths, unleash the Mr Sheen, kickstart the industrial vacuum cleaner and smear on the elbow grease.

It's called Spring Cleaning but at Tomago the traditional dust and dirt removal takes on a whole new meaning and we do more than flip the mattresses, fluff the cushions and wash the curtains.

Old posters and signs were pulled down and thrown away, broken or unused furniture was disposed of or repurposed, redundant or out-of-date chemicals, paint and oil were taken to the oil storage yard and old electrical items such as PCs, fax machines and printers were collected by the IT team for disposal.

To thank everyone for their efforts, a group lunch was held at the canteen and two people who were nominated by their supervisor for their cleaning efforts won a three-day, trackside ticket for two to the inaugural Coates Hire Newcastle 500, final round of the Virgin Australia Supercars Championship.



Every staff member was asked to get involved and help with the clean-up.

Anthony "Cookie" Cook (left) handing a Summer Care Package to David Wild from security.



SUMMER CARE PACKAGES BEAT THE HEAT

SUMMER — WHEN LONG, HOT DAYS MEAN BEACH TIME, BARBECUES, BACKYARD CRICKET, AND BALMY EVENINGS BY THE POOL.

The reality though is that, during summer, daytime temperatures start high and go up from there and we need to be acutely aware of the workplace health issues this can cause.

"With summer approaching we have been highlighting the need to be prepared for working in hot environments on hot days," Tomago Aluminium's Occupational Health and Hygiene Officer Anthony "Cookie" Cook said.

"We all need to understand that there are work areas here that can be uncomfortable over summer so we need to make sure we get plenty of hydration, understand our working conditions and prepare for work by getting plenty of rest and eating properly.

"Often people think they are doing okay on a hot day so they'll tough it out, push through and not make a fuss. Then they come down with heat stress.

"Catching heat stress early by understanding the symptoms is vital and so is looking for those symptoms in workmates."

Heat stress symptoms include – lethargy, dizziness, nausea, vomiting, headaches, slurred speech, muscle cramps in arms and legs, irritability and breathing changes.

Cookie's tips for beating the heat – drink plenty of water before starting work and then drink regularly during the day. Also take a break from hot areas whenever possible.

"When it all comes down to it, a person's health is more important than an ingot of aluminium."

To prepare for the summer heat Health Services handed-out Summer Care Packs to all work crews during November to ensure everyone knows how to beat the heat. The helpful pack, an insulated soft esky, contained sunscreen, an ice brick and an information sheet explaining how to prepare for and prevent heat stress over summer.

JOHN PENKALA MEMORIAL GOLF DAY

(Left to right) Phil Humphreys, Mark Jordan, Mark Westbury, Darren McGilvray.



AT TOMAGO ALUMINIUM, JOHN PENKALA'S NAME IS HELD IN HIGH REGARD.

John had worked at Tomago for 28 years, first with the IT team and then, for the last decade of his working life, with Automation. Socially, he lived for the Shortland Waters Golf Club where he not only played a round or three but also sat on the board.

Former workmate Stuart Henderson remembers John as "a mate who enjoyed life" and the company of his many friends.

"Right throughout his time he was the organiser of all things social," Stuart recalls. "Barbecues, golf days, social days – he just loved socialising with people. Nobody had a bad word to say about him and he had a great attitude to life.

"He was a really top guy."

Sadly, John passed away on July 17, 2015 following a very short illness, just two weeks shy of his 58th birthday.

John would have turned 60 on July 30 this year. To mark the occasion the John Penkala Memorial Golf Day was held at Shortland Waters on Sunday July 30, with perfect weather (ordered-up by John?) for the 20-plus teams taking part.

Tomago was represented by four teams in the four-person Ambrose, all of them John's former workmates.

Who won? Who lost? It doesn't really matter because everyone was there to celebrate an old mate and play their round in the way John would have played – with a big dose of fun and enjoyment.

A TAC Golf Day was also held at the Pacific Dunes Golf Club on Friday, November 10. The four-person Ambrose entry cost just \$75 which included cart hire, breakfast, pre-round coffee and lunch.

NEW CANTEEN IDEAS ARE COOKING



EVERY HOME HAS A DINING TABLE BUT SOMETIMES IT'S JUST NICE TO GO OUT FOR A MEAL.

Here at Tomago, every production area has its own crib room but every now and then it just feels good to walk down to the canteen.

The trouble is, the canteen looks a little...ummm...inhospitable. Nice people preparing and serving great food on the inside, the visual appeal of a garden shed on the outside. And it is this appeal that Occupational Health and Hygiene Officer Anthony 'Cookie' Cook wants to change.

"We want to create an area that's inviting, a place where you'd love to come and meet people, share a meal or just catch up with workmates," he said.

Cookie called for free-range imagineering and design ideas to improve the appearance while keeping functionality and practicality.

"Design ideas can change the seating, do some remodelling or landscaping, alter the lighting, maybe even include some artworks or add music or audio-visual influences. I don't think a TAB agency or pokies will get a go but there's plenty of scope for everything else.

"Basically, we want to put some 'fun' into 'functional'," he added.

The ideas arrived as sketches, drawings and written explanations highlighting key design points. The winner — Kate Brown from Safety — will be asked to expand on her ideas and could even be called-in as a consultant during the renovation process.

Kate has won a ticket to the Members' Enclosure at Sydney's Royal Randwick Racecourse with food and drink supplied.

COMPUTER-BASED TRAINING ROOM ON-SITE



TOMAGO ALUMINIUM LIKES TO HAVE UP-TO-DATE EQUIPMENT BUT WE ALSO LIKE TO GET MAXIMUM VALUE FROM OUR OLD EQUIPMENT, TOO.

Computers are replaced every four years and this year, with tablet roll-outs across the site, there was an abundance of old computers which were superfluous to requirements. What to do with them? Put them in a new, full-time, special-purpose, computer-based training room, of course!

"It came about with an idea from Matthew White in Desktop Support," IT Technical Supervisor Dennis Moncrieff said.

"Matt suggested a permanent training room could be set-up for the computers but we had to find the spare space," Dennis said.

Ben Cook from Human Resources solved that problem, finding a suitable room that could hold up to 12 people. It was given a fresh coat of paint, dedicated furniture and, with the necessary equipment installed by IT, the previously unused room became a fully operational computer based training room.

Such was its necessity that it was still being brought up to scratch when the first booking came through — marked 'Urgent' — for eight potline engineers.

"It's now being used about twice a month and what it means is that our guys aren't spending time setting-up and taking-down equipment, so there is a big time saving there," Dennis said.

"It also means we are no longer using old equipment for training purposes."

To book the room simply call the Helpdesk (ext. 9236).



IOT TAKING ON THE WORLD

(Left to right) Peter Horsburgh, James Dorrington and Brodie Fairhall working on one of the IoT devices.

TOMAGO ALUMINIUM NOT ONLY PRODUCES HIGH QUALITY METAL BUT ALSO WORLD-CLASS CLEVERNESS, AS THE IN-HOUSE DEVELOPED 'INTERNET OF THINGS' AMPLY DEMONSTRATES.

We recently reported how the team from Automation had developed its own electronic machine-monitoring system after discovering that commercially-available, off-the-shelf products simply couldn't do the things they needed done.

Led by Peter Horsburgh, the team pre-programmed the units to monitor defined operating parameters of individual machines around the site and fitted them neatly into a compact, dustproof plastic casing with an antenna on top to transmit data in real time.

Known simply as the 'Internet of Things' or IoT, it is proving to be a safe and cost-effective way to collect information from operating machinery.

The landscape of electronics is a rapidly changing thing however and, right now, the team is working on Version 2, which further expands its functionality.

"We plan to have a working prototype ready by mid-November that will, for a start, measure temperature and vibration on critical parts of rotating machines. What we'll be looking for are the differences in performance of machine components over time," Peter Horsburgh said, "so that machines can be taken offline for repairs when they need to be, not just because it is part of the maintenance cycle."



(Left to right) Dennis Moncrieff, Brodie Fairhall, Peter Horsburgh and James Dorrington holding the IoT devices.

"The whole idea is to operate at a low cost point. Say it costs \$3,000 to measure one machine's parameters via its control systems; we can do the equivalent for \$150 with the IoT. There are endless possibilities of what it can measure."

"If we get this right it will open up so many opportunities for us. It's future-proofing. I reckon we are going to see them grow in the marketplace," Peter said.

The IoT development team's efforts were recognised at this year's Innovation Awards.

CELEBRATING YEARS OF SERVICE

CONGRATULATIONS TO ALL OUR EMPLOYEES CELEBRATING MILESTONE YEARS OF SERVICE FROM MAY TO THE END OF 2017.

25 YEARS

| | |
|------------------|---------------|
| Garry Owens | Carbon |
| Leslie Bates | Carbon |
| Michael Linton | Carbon |
| Marc Newman | Cast Products |
| Glen Astapyk | Cast Products |
| Scott Bowman | Cast Products |
| Stephen Metcalfe | Liquid Metals |
| Peter Power | Liquid Metals |
| Jason Murphy | Liquid Metals |
| Darryl Frew | Liquid Metals |
| Ronald Turvey | Liquid Metals |
| Paul Stoneman | Liquid Metals |
| Craig Swan | Liquid Metals |
| Martyn Smith | Liquid Metals |
| Dean Hayes | Liquid Metals |
| Garry Hug | HSEC |
| Bradley Burgess | HSEC |

20 YEARS

| | |
|--------------------|-------------------|
| Don Caruso | Cast Products |
| Craig Fullick | Liquid Metals |
| Paul McNamee | Liquid Metals |
| Graeme Smith | Liquid Metals |
| Stephen Harvey | Liquid Metals |
| Mark Chenery | Liquid Metals |
| Gregory Wilson | Liquid Metals |
| Dallas Isaac | Liquid Metals |
| Scott Fairhall | Liquid Metals |
| LesleyAnne Clifton | Business Services |

10 YEARS

| | |
|--------------------|-------------------|
| Dennis Kelly | Carbon |
| Leonard Davis | Cast Products |
| Andrew Ripley | Cast Products |
| Darren Saxby | Cast Products |
| Geoff McQueen | Cast Products |
| Craig Middleton | Liquid Metals |
| Gregory McLoughney | Liquid Metals |
| Heath Williams | Liquid Metals |
| Nathan Lantry | Liquid Metals |
| Greg Malone | Liquid Metals |
| Paul Harwood | Liquid Metals |
| John Astill | Liquid Metals |
| Michael Medcalf | Maintenance |
| Mark O'Connell | Maintenance |
| Christopher Hoye | Maintenance |
| Deborah Chen | Business Services |

WELCOME TO TOMAGO'S NEW STARTERS

LUKE JURATOWITCH

HV Substation

NEIL DAY

Warehouse

MICHAEL AITKEN

Liquid Metals



Tomago Aluminium's People, Safety and Environment manager, Simon Mitchell.

HITTING BACK AT MENTAL HEALTH AND SUPPORTING THOSE IN NEED

MENTAL ILLNESS CAN BE AS DEBILITATING AS A PHYSICAL AFFLICTION BUT, UNLIKE A PHYSICAL IMPAIRMENT, IT IS INVISIBLE; NO SCAN OR X-RAY WILL DETECT IT.

Mental illness is surprisingly common, with as many as one in every five people aged 16 and up experiencing it each year. Sadly, of that number, around 65 per cent either delay their treatment or fail to get treatment altogether.

To help combat mental illness Tomago Aluminium has its own Employee Assistance Program (EAP) which is available as a free service not only to employees but also to their immediate families.

Working in conjunction with professional counselling service Converge International, the EAP guarantees full confidentiality, with independent consultants who can be accessed either face-to-face or by phone.

EAP usage is well above current industry rates, says Tomago Aluminium's People Safety and Environment manager, Simon Mitchell.

"Mental health is more widely spoken about within the community. While our employees have good rates of use of the EAP service, we should continue to reach our work colleagues, friends and families and encourage them to seek help when needed," he said.

Simon added that, with the Christmas period approaching and the pressure that can put on families, it is timely to remind everyone that Converse International counsellors can help with interpersonal relationships and family matters, personal and emotional issues, grief, harassment, bullying, grievances and work-related stress such as changes in the workplace.

They can also help with alcohol and drug-related issues and also crisis and trauma counselling.

TO HAVE A DISCUSSION WITH A CONVERGE INTERNATIONAL COUNSELLOR SIMPLY CALL 1300 687 327.



John Smith at work enjoying his last few days at Tomago Aluminium.

JOHN'S TRIUMPH OVER ADVERSITY

DECEMBER 23. IT'S A WIND-DOWN DAY, A TIME WHEN MOST OF US ARE MAKING PLANS FOR THE COMING CHRISTMAS HOLIDAY BREAK.

For John Smith though it is a date best forgotten, the day on which his life was thrown a complete curve ball, the day John was told he had Myelodysplastic Syndrome factor 7 (MDSf7), a form of leukaemia affecting bone marrow.

The diagnosis and following prognosis made time stand still. He went through every stage of grief – denial, anger, bargaining, depression and some degree of acceptance.

But John is a fighter and that meant facing treatment for his illness. He needed a bone marrow transplant and quickly had his first lucky break. In February 2013 his younger sister was tested and came up as a perfect match. Surgery was scheduled and John had his bone marrow transplant on June 1.

If you think the treatment and recovery was easy, like some TV medical drama, think again.

There were some “graft versus host” problems post-surgery and John spent almost six months in intensive care at Westmead Hospital, where he was fed a cocktail of drugs. His body consumed more than 200 litres of blood in that period and his weight dropped dramatically.

But he was buoyed, he says, by the amount of support from his workmates and was “completely overwhelmed” by the amount of phone calls and hospital visits from TAC colleagues.

In March 2014 John was back at work. Sure, it was only for two days a week but it felt good. The company continued to offer support and his workmates morphed into his second family, a family of which he is proud to belong. Even the canteen staff rallied behind him, preparing special meals to meet his particular dietary needs.

John will soon start the next phase of his treatment, a 12-week program that will require him to travel to Sydney every week.

Because of that he has made the difficult decision to leave Tomago Aluminium because, he says, it gives him the best chance of success.

“I want to thank everyone here who has supported my journey both emotionally and financially through access to the extended personal leave scheme,” John said.

John has probably been called a few names in his life but right now the titles “fighter” and “winner” are probably the most appropriate.

He has stuck it out and defied the odds. Who knows what the future holds but hopefully, it will only be good things.

Good luck, John, and keep on punching.

“

I AM PROUD TO BE A PART OF THE TOMAGO ALUMINIUM FAMILY.

”



(Left to right) Nat Godwin, Neil Morgan, Neil Lindus, Greg McLoughney and Ben Henshaw.



The Health, Hygiene and Safety Staff, with the help of the Occupational Health and Safety Committee, were on hand to help promote and encourage everyone to ask "R U OK?".

TOMAGO STEPS UP FOR R U OK DAY

"MATE, ARE YOU OKAY?"

It's a simple question but probably one of the most important ones we can ask a fellow human being. So important, in fact, it is even recognised with its own day, R U OK Day.

The R U OK campaign was designed to allow people to meaningfully connect with those around them, supporting those struggling to cope by boosting our confidence to ask them about life's ups and downs and to nurture our sense of responsibility to connect with and support others.

For those who may be feeling low, it strengthens their sense of belonging by knowing people are there for them.

"It's all about taking the initiative when you feel someone is struggling, showing them that you care," Tomago Aluminium Occupational Health and Hygiene Officer Anthony Cook said.

"It encourages all of us to keep an eye out for each other and simply ask the question if they are a bit concerned about someone. We don't have to be mental health professionals, just people who care."

Once again, Tomago Aluminium stepped-up for R U OK Day on September 14 with free coffees for Health and Hygiene visitors and the Workplace Health and Safety committee on hand to help promote the day with information packs.

"It's not about putting pressure on anyone, it's just making sure they are okay. Most of the time they will be but there might just be that one time they won't."

And what happens when someone says no, they are not okay? A problem shared can be a problem halved and sometimes just talking something through can help ease the worry.

"No-one is expected to solve a problem but simply talking it through is often a great help."

Tomago Aluminium's Employee Assistance Program, operated by Converge International, offers free, confidential, short term counselling for work and personal issues. Call 1300 687 327 for appointments.

Other support services include:

- Lifeline 13 11 14**
- Suicide Call Back Service 1300 659 467**
- Beyondblue 1300 224 636**
- Headspace (for under-25s) 1800 650 890**



MO BROS MOVEMBER

MAKE A MOVE IN



DID YOU NOTICE MANY UNSHAVEN MALE TOP LIPS AROUND TOMAGO DURING NOVEMBER? AND DID YOU WONDER WHY?

It wasn't that some of the male employees were trying to conserve razor blades, it was the celebration of Movember, a month of moustachioed machismo, a fundraising frenzy for the fellows to let the facial fungus flourish while raising money to help men's health.

The idea is simple, the result amazing. Everyone taking part funds their efforts through sponsorships and the money goes to the Movember Foundation, which uses it to help fund research into testicular cancer, prostate cancer, mental health and suicide prevention.

VAP Supervisor Todd Anthony is the man behind Movember at Tomago after exposure to the special month while working in the fitness industry a few years ago.

Last year he sought permission to have Movember adopted on-site and a 12-strong band of Mo Bros collectively raised \$1,100, a figure the company raised to \$2,200 with its own donation.

Todd, whose personal fundraising goal this year is \$1,000, says the number of interest shown by potential mo-growers has increased threefold over last year with 12 committed to fostering fungus at the start of the month.

"Last year we did pretty well but I am hoping we can go way bigger than that this year. Two thousand, two hundred dollars was great but now we want to blow it out of the water," Todd said.

The girls are also able to get involved with Movember as well with "Moovember". All they have to do is simply set a distance goal to walk, run, swim, cycle or even row, get sponsorship and raise the money.

Todd said anyone can become a Mo Bro anytime during Movember.



COMING HOME

AUSTRALIA IS ALL ABOUT MATESHIP AND IT IS PART OF OUR NATIONAL TRADITION THAT MATES LOOK AFTER EACH OTHER.

“

NOTHING IS MORE IMPORTANT THAN LOOKING AFTER SOMEONE ELSE'S WELLBEING.

”

Craig Rogers and his family featured in the new video.

It was only natural then that the philosophy would be carried-over into the workplace, that mates would look after their mates.

No surprise then that Tomago Aluminium was among those companies that not only said the words but embraced the idea wholeheartedly and put it into practice.

“We launched ‘Mates Looking After Mates’ about two years ago, which encouraged employees to look-out for someone they feel is at risk,” Simon

Mitchell, TAC’s People Safety and Environment manager recalled.

“It isn’t about catching someone out, it is about having a conversation with someone who you feel might be at risk, because we care about each other whether that be a work colleague, a supervisor or the CEO.

The Mates Looking After Mates program, called ‘Coming Home’, has been rebooted leading into the new year with a new video featuring past and present

employees. It will be shown to everyone in the first quarter of 2018.

Simon says the reboot will also help employees understand how to combat workplace complacency brought about by the familiarity of experience which can lead to inadvertent risk-taking.

“We want to build a team culture, we want to have people who are not just working with each other but also engaging with each other.

JOEL REACHES GREAT HEIGHTS

JOEL BERRY, THAT CRAZY GUY WHO REGULARLY CLIMBED TOMAGO'S COKE SILO STAIRS AND POWER-WALKED GLENROCK RESERVE HAS FINISHED HIS NEPALESE ADVENTURE.

Joel, a maintenance fitter, did the trek as part of a crew of 28, including former Newcastle Knights players, friends and supporters, to raise money for the Mark Hughes Foundation, a charity group tasked with beating brain cancer.

Hiking through Nepal in mild daytime conditions but enduring -10 degrees celsius nights, the group finished 5,545 metres above sea level at the Mount Everest Base Camp after more than a week.

Described by Joel as a "once-in-a-lifetime experience" and a "great challenge", meant lugging 20-kilo backpacks, sleeping rough, and breathing thin air.

Joel and Mark have been mates since childhood and with Hughes fighting the insidious disease Joel saw the trek as the ultimate expression of mates helping mates.

The crew, which included Matty Johns, Bill Peden, Paul "The Chief" Harragon, Danny Buderus and Kurt Gidley, reached Everest Base Camp in late October after nine days of hard slog.

The foot-weary walker is now back home, back at work and immensely proud of his efforts, which helped raise almost \$500,000 for the Foundation.

And how was it?

"It was so rewarding, the experience of a lifetime. I had the time of my life. To do that and help raise money for such a great charity just felt great."



Paul Harragon (left) with Joel Berry at the top of Everest Base Camp.





The Westpac Rescue helicopter, pictured here with the Tomago boards members visited the site this year to thank staff for their ongoing support.

A YEAR IN SUPPORT OF LOCAL CHARITIES

AT TOMAGO, WE LIKE HELPING THOSE WHO HELP THEMSELVES, WHICH IS WHY WE ARE PROUD TO SUPPORT A NUMBER OF LOCAL CHARITIES.

This year alone we have given back more than \$50,000 to the community for causes big and small, from supporting the Tomago Bowling Club to getting behind Variety, the Children's Charity and the Mark Hughes Foundation.

If you have a charity in need of support, contact Katie Burns on 4966 9936.

- | | |
|----------------------------------|------------------------------------|
| Raymond Terrace Athletics Centre | Immune Deficiency Foundation Trust |
| Bay Board Riders Association | Mark Hughes Foundation |
| Newcastle Show | NSW Hockey Masters Team |
| Tomago Bowling Club | Variety Postie Dash |
| HMA | U14 Maitland Netball Team |
| HMRI | Sporting Hope |
| Horizons Sporting Events | Westpac Rescue Helicopter |
| Variety | Mattarra Festival |
| Stroke & Disability Information | Charlie's Run 4 Kids |
| Disability Olympics | Newcastle Rotary Club |
| Hexham Bowls Club | Port Stephens Council |
| Rathmines Public School | Hunter Defence Support Network |



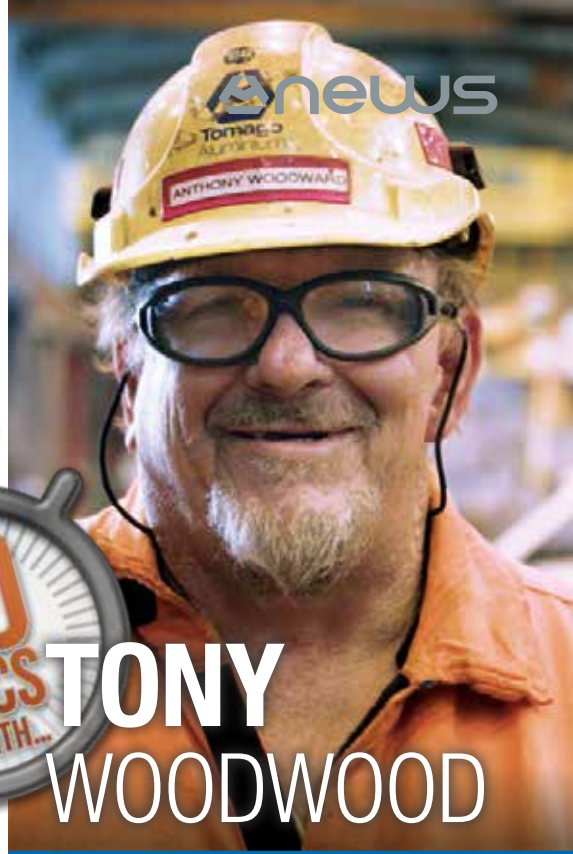
Simon Mitchell with Tony Lewis and his bike used in the Variety Postie Bike Dash.



Barry Walton with Wayne Pringle encouraging people to sign up to the \$2 Challenge.



Wayne Pringle and Katie Burns presenting Variety – The Children's Charity with a cheque for \$23,513 from the Out of Pay donation scheme.



TONY WOODWARD



The Tomago Tri Cycles team in action at Variety's Spin 4 Kids outdoor spin challenge.

What is your current role?

Potline support day shift.

Finish this line: When I'm not at work...

I'm woodworking in my shed or caravanning.

If you had \$100 to spend on yourself what would you do with it?

Give it to the tab.

Biggest regret?

None.

Favourite food?

Nearly anything edible.

What were your first thoughts of TAC?

Thirty-three years ago, big and clean.

What's the best piece of advice you've been given?

Respect and be good to your mother.



Wishing all staff & their families

Merry Christmas

AND A HAPPY NEW YEAR

Once again, Tomago Aluminium's management were pleased to deliver traditional hams and Christmas puddings to all staff to say "thank you" for their hard work throughout the year.

We wish everyone a safe, relaxing and fun-filled festive season and spare a thought for those dedicated staff who will be working through the Christmas and New Year periods.

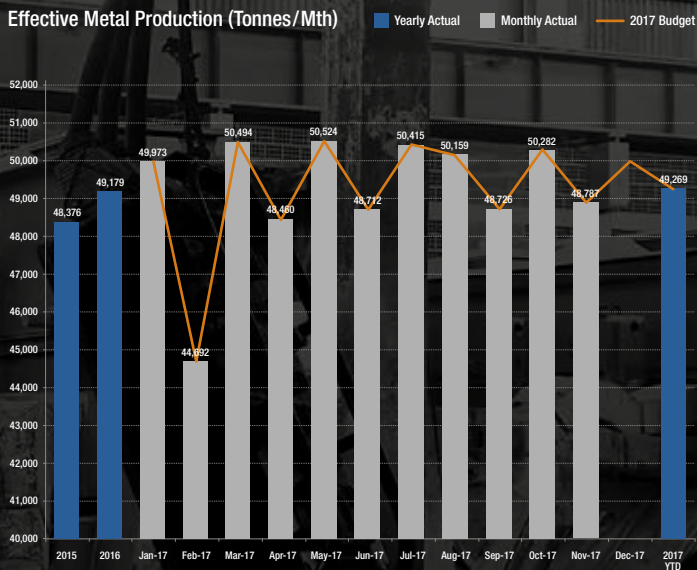
Our best wishes to everyone.

FUN FACT:

We make enough aluminium in one day to make all the Australian cars for a month.

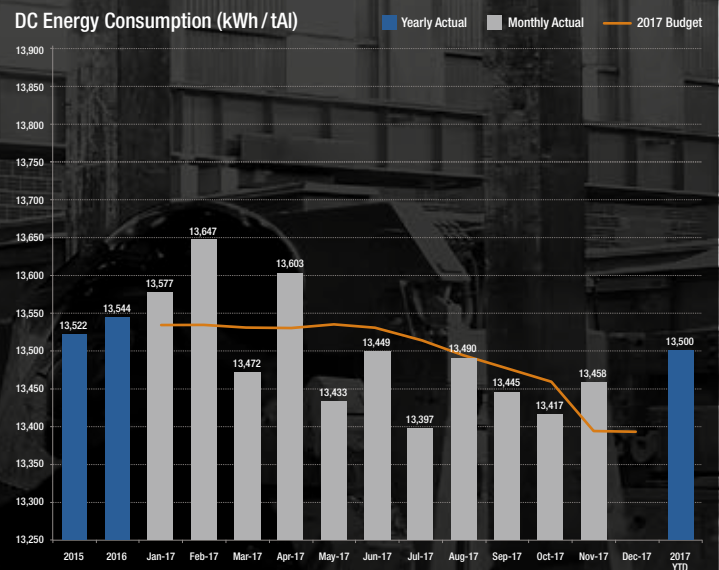
TOMAGO'S KEY PERFORMANCE INDICATORS

Effective Metal Production (Tonnes/Mth)



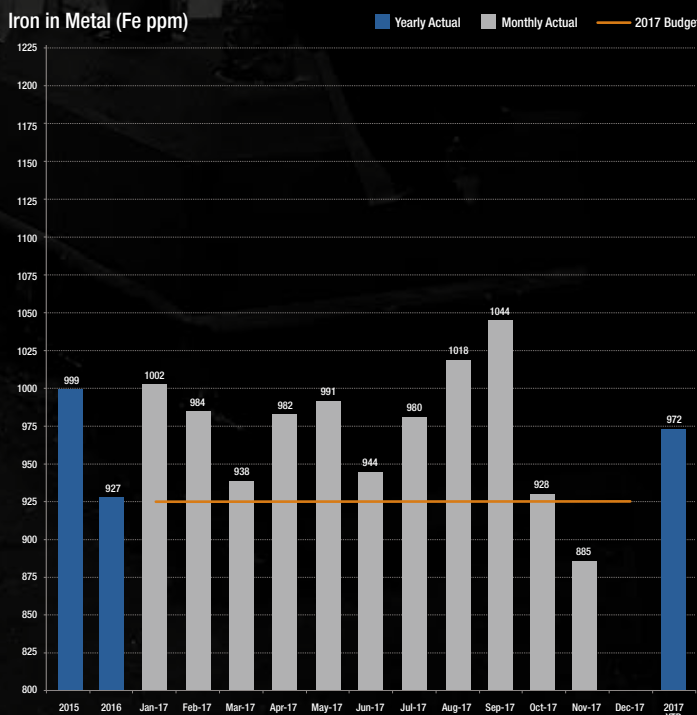
The Effective Metal Production is the total amount of hot metal tapped from the pots. It includes both hot metal tonnes delivered to Cast Products plus any reclaimed cold metal.

DC Energy Consumption (kWh / tAl)



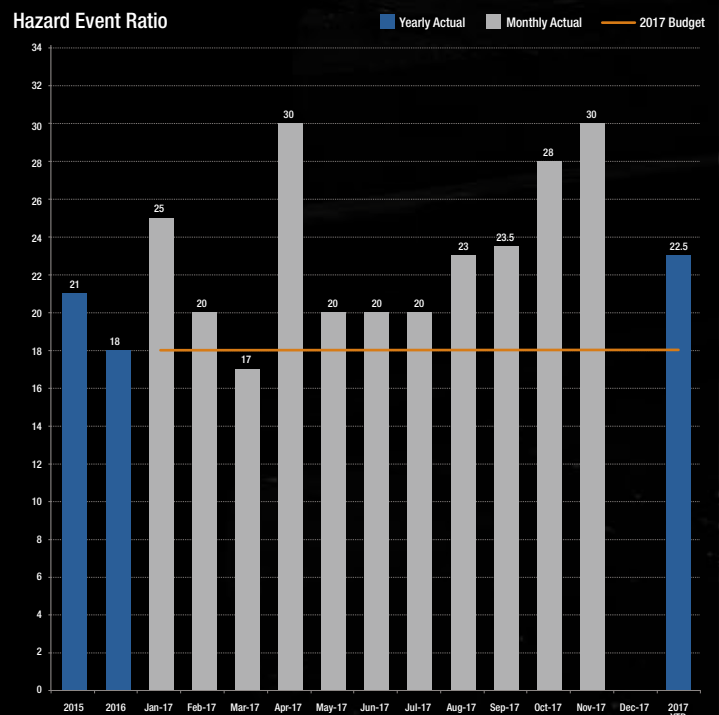
Energy Consumption measures how much power we use to make one tonne of aluminium. The lower this number the better!

Iron in Metal (Fe ppm)



Iron in metal is our main measure of quality and purity. The lower the iron content is, the better.

Hazard Event Ratio



The Hazard Event Ratio measures the number of injuries in proportion to the number of safety related events.