



Commentary

Industry/FPANZ Update

Welcome to our first newsletter for 2015.

Having now been in the office for almost 6 weeks for the new year, it seems that we are all getting far busier and the workloads are picking up for the industry. With a growing workload it is imperative that the quality of workmanship and professionalism and ethics of conducting business remain. We have an example of poor service and fraudulent activity to report in this month's content, which highlights the conduct on non-professional operators.

The FPANZ council together with the board have agreed to next year's Fire NZ being held in Wellington at the TSB Arena. We once again are pleased to partner with the IFE and SFPE to bring you this annual pan industry event. The dates are October 15th and 16th. The Fire NZ committee have met this year and agreed the conference theme and are now well down the planning stage. We are seeking significant sponsorship opportunities so if you are interested please ensure you make contact with us here at FPANZ.

SIG Groups

The Special Interest Groups will meet this month to kick off the 2015 agenda and define their two goals to achieve this year. It is important to note that SIGs need leadership and commitment to achieve plans, and cannot do it in isolation. We are currently looking for a permanent SIG chair to lead the contractors group who remain a key part of the association and its membership base. If you have an interest in this role or joining a SIG, then please contact the FPANZ office or drop us an email on fpanz@fireprotection.org.nz

Fire Australia - March 2015

In case you weren't aware, FPA Australia's Fire Australia Conference and Exhibition is being held on the Gold Coast, Queensland on March 25 and 26. We have included the full conference details and registration forms in this newsletter.

We have recently had a few enquiries from FPANZ members regarding their eligibility for the discounted member registration rate to this industry event. **FPA Australia have kindly agreed to apply a membership discount** so to ensure this is applied correctly when completing the registration form, please write "FPANZ Member" on the form so the appropriate discount is applied.

Our Survey is now online

It is a timely position, as we all know that MBIE are reviewing the acceptable solutions and compliance process through a variety of stakeholder forums. What is also apparent is a lack of input from the wider FPANZ member base, as a majority of the respondents were Fire Engineers or Consultants. In order to provide a balanced approach, FPANZ have met with the review panel and provided further submissions on key issues faced by industry.

We have committed with MBIE to a further FPANZ survey which is now available on our website at www.fpanz.co.nz

to enable you as our members the ability to provide further input into what you see are the KEY issues that need review.

Membership

Thank you to those of you that have now completed your membership renewal process for the 2014/2015 financial year. If you have any questions about renewing your membership under the new structure please feel free to contact one of the team on 09 414 4450.

Marketing Brochure

We have completed the first of a series launching a new marketing brochure to raise the profile of the association's members in the wider marketplace and community. The brochure promotes the values of the FPA and benefits of people choosing FPA members over those who are not. The flyer is available to go in with your quotes to help create a point of difference when quoting against non-members, and is available from the FPANZ website. The next flyer will be focussed on HOFFE.



CFAC Certified Fire Alarm Contractors

We have also now completed the annual review of the industry fire alarm companies that see value in being certified. This process is consistent in its approach and places your company in a select group of key contractors who are leading

continued overleaf...

› FEBRUARY 2015 ISSUE

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Commentary *(continued)*

the industry. CFAC companies are recognised as having higher standards and processes in place regarding the installation and servicing of Fire Alarm Systems. This is a separate process that is audited to ensure the high levels of business process, training / development and quality are being met or exceeded.

We are more than happy to assist any companies that would like to achieve CFAC certification.

FPANZ Listings

The association also publishes a number of listings pages in our newsletter and on our website, these include the following

FPANZ Certified Evacuation consultants, FPANZ Certified Fire Alarm Contractors, FPANZ Fire Extinguisher Service Agents and AON Listed Sprinkler Contractors.

With the recent membership renewal process all details have been checked as we have received the membership application forms back. Please take the time to double check your details in the listings and contact us if we need to correct anything to do with these listings.

As a side note the AON Listed Sprinkler Contractors list is provided to us and published on behalf of AON.

We will be adding to these listings to also provide details of FPANZ passive installers and suppliers as well as a list of FPANZ Inspection providers as part of our drive to lift industry standards and identifying gaps in supporting our membership base.

We at FPANZ receive lots of requests for recognised industry suppliers and this is a great mechanism to promote a professional ethical membership base.

Outlook

We look forward to working with all of our existing members and cementing relationships with new members and agencies over the coming year.

The Fire Industry has over 500 individual companies that operate in the market and employ over 3700 staff. We are a significant contributor to the economy and play a vital part protecting billions of dollars of property and millions of people.

This recently was highlighted yet again in the proceedings and prosecution with the KIWI SELF STORAGE fire in Kilbirnie with a combined loss of over 9 million dollars and over 300 people directly affected by the event. As an industry Association we have a direct focus to educate and advise on the benefits of fire protection and will continue to pursue this vision.

Keith Blind, *Executive Director, FPANZ*



The fire at the self-storage facility in Kilbirnie burned for more than a day. Photo: RNZ / Diego Opatowski



Fire Protection Association New Zealand

NEWSLETTER

Advertising Rates 2014-15

We are pleased to offer the following rates for those members who are interested in newsletter advertising.

These rates are quoted as **casual rates only** and for members you may apply your discounts under your membership plan as follows: **Platinum 25%, Gold 20%, Silver 15%, Bronze 10%**

| | Casual | 3 Issues | 6 Issues + | Dimensions (H x W) |
|----------------|-----------|-----------------|---------------------|--------------------|
| Full Page..... | \$1050.00 | \$1000.00/issue | \$945.00/issue..... | 25cm x 18cm |
| ½ Page..... | \$900.00 | \$845.00/issue | \$810.00/issue..... | 12.5cm x 18cm |
| ⅓ Page | \$750.00 | \$705.00/issue | \$675.00/issue..... | 8.4cm x 18cm |
| ¼ Page..... | \$600.00 | \$560.00/issue | \$540.00/issue..... | 6.3cm x 18cm |
| ⅛ Page | \$500.00 | \$470.00/issue | \$450.00/issue..... | 3.2cm x 18 cm |

Evacuation Consultants Group Update

Author **Jenny Maxwell**
– EVAC Group Chair

Dear fellow Evacuation Consultants,

2014 was a very full-on year both in terms of my professional work load and taking part as chair of the Evacuation Consultants Group SIG. In recognition of this and to this end (I am being absolutely selfish here), I have asked Ela Langford, Fire Safety Trainer & Evacuation Consultant to assist me as joint chair. Ela comes with high credentials having been involved in fire safety matters since 2009, and has extensive experience in the area of fire safety and evacuation procedures in hospitals, childcare, age-care facilities and special needs facilities.

Ela and I have been very busy attending MBIE meetings on behalf of the evacuation consultants group, assisting MBIE by responding to their need for industry relevant feedback and have submitted answers to their questionnaires. The questionnaires were part of a MBIE consultation process to find answers within the industry to the identified need for changes to legislation and gain greater alignment across the various documents governing our industry. We will continue to liaise with MBIE to this effect and of course keep you all abreast as to when and if changes occur.

We are also involved in reviewing the current evacuation consultant's certification processes with FPANZ and sincerely hope our efforts will result in a better workable process which will reflect the professional abilities of our industry more accurately.

We are looking forward to seeing you participate in the exciting journey of becoming stronger as a valued industry sector and hope to see you all enjoying the professional development program that is being hatched as I am writing.



FPANZ Passive Group Update

Author **Ron Green** – Passive Group Chair

Another year ahead of us and with Passive Fire Protection it will be an interesting one! We will be working with BRANZ this year in regards to working on a Code of Practice that will benefit all members and beyond. The document won't be supplier specific but will provide information and fundamentals regarding the installation of fire stopping systems. The Code of practice will be part of the learning process and suppliers of systems will still need to play an important part of the whole training process.

In the meantime I am very concerned regarding the lack of knowledge and understanding by many in the fire protection industry of how to fire stop fire alarm cables and sprinkler pipe. In my capacity as a Passive Specialist one of my roles is to inspect fire stopping of many services for new construction. Many companies are leaving themselves open to potential future litigation claims and more importantly putting people and property at risk in a genuine fire situation. Passive Fire Protection is part of the overall fire safety design of a building which needs to be taken seriously.

For those who don't know, the law allows a building owner up to 10 years to make a claim for work not completed correctly to the building code. As part of 'leaky building claims' incorrect lack of fire stopping is being added to claims and the Lawyers are seeking those who may be responsible. This was reiterated by a Lawyer who spoke at the FPA conference saying you don't have to have a fire to have legal action taken against those who install systems incorrectly.

As an industry we are well aware of risk but from what I experience there is too much 'apathy' in regards to fire stopping of service penetrations.

If you are a company who undertakes installation /service work and run services through walls and floors here are a few questions to ask yourselves to see if you are vulnerable:

1. Do you know when a wall or a floor is a fire separation? If not how do you know if you are penetrating a fire separation?
2. Do your staff know that Passive Fire Protection is all about Tested and Compliant systems which means they need to what the systems have been tested for? Example I see some sealants used for fire stopping cables when they are only tested for gaps between solid substrates!
3. Have your staff / sub-contractors received correct training on how to apply the products they are using? I may see the correct product used on a penetration but the depth of sealant may require to be at 26mm and when inspected only 3mm is applied!
4. Do your staff/sub-contractors have suppliers data sheets on site so they know if the hole is larger than what the system limitations permit? I ask technicians on site if they have supplier information so they know the limitations of the system and 99% of the time the answer is no!
5. Have you signed a PS3 for fire stopping? If you have and your staff /sub-contractors have not completed the fire stopping correctly then let's hope the 10 years goes quickly without incident!

I apologise for what may seem a negative start to the year however most trades have a lot to learn when it comes to fire stopping and the Fire Protection Industry needs to be leading the way.

During the year the FPA will be providing some education for members in the area of Fire Stopping but in the meantime either tag out of doing fire stopping, employ professionals or have your staff trained properly!

The Passive SIG group welcomes you to attend its regular meetings and any feedback.

HOFFE Survey Project

In New Zealand, fire extinguishers have previously been considered as specified systems, by interpretation of the law, and then their maintenance was mandatory. However, the Ministry of Business, Innovation and Employment (MBIE) has issued a clarification which removes fire extinguishers from the list of specified systems.

In this context the New Zealand Fire Service (NZFS) started the Hand Operating Fire Fighting Equipment (HOFFE) project.

Currently, data is being collected on the use and effectiveness of portable extinguishers through two surveys, for which the NZFS would like to ask your cooperation. More information on the project and a link to both surveys can be found on: <http://www.fire.org.nz/Fire-Safety/Safety-Devices/Pages/HOFFE-project-survey.html>

The first survey* is intended to be completed by extinguisher service agents after any extinguisher use in order to research the effectiveness and potential costs and savings associated. The survey has been up and running for a few months now, and it is obvious that many service agents have simply adopted the survey form as part of their day to day operations. However, for the ones not involved yet, please get in behind the industry and lend your support to this important project.

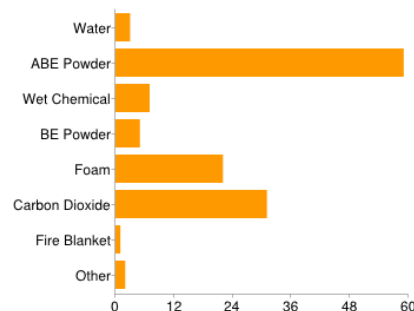
The second survey* is intended to be filled in by building owners and property managers in order to research portable extinguisher use within their properties.

So far, close to 110 survey responses have been recorded, however many more are needed in order for the research project to progress.

*:The information provided in this survey will be confidential and used only for the purpose of the review of the use of Portable Fire Extinguishers (subject to any legal requirements to disclose, including the Official Information Act 1982).

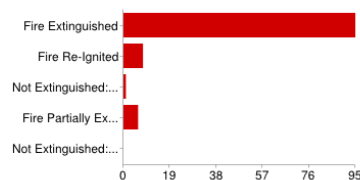


Extinguisher Type?



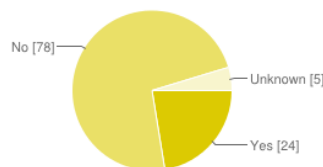
| | | |
|----------------|----|-----|
| Water | 3 | 3% |
| ABE Powder | 59 | 55% |
| Wet Chemical | 7 | 7% |
| BE Powder | 5 | 5% |
| Foam | 22 | 21% |
| Carbon Dioxide | 31 | 29% |
| Fire Blanket | 1 | 1% |
| Other | 2 | 2% |

Effectiveness



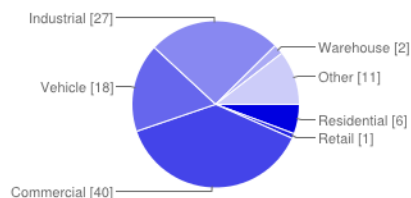
| | | |
|---|----|-----|
| Fire Extinguished | 95 | 89% |
| Fire Re-Ignited | 8 | 7% |
| Not Extinguished: Extinguisher Not Suitable | 1 | 1% |
| Fire Partially Extinguished | 6 | 6% |
| Not Extinguished: Too Large | 0 | 0% |

NZFS Called



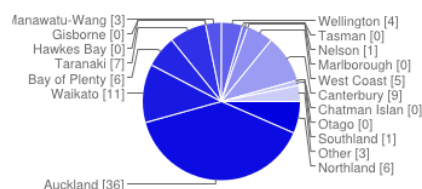
| | | |
|---------|----|-----|
| Yes | 24 | 22% |
| No | 78 | 73% |
| Unknown | 5 | 5% |

Building type



| | | |
|-------------|----|-----|
| Residential | 6 | 6% |
| Retail | 1 | 1% |
| Commercial | 40 | 37% |
| Vehicle | 18 | 17% |
| Industrial | 27 | 25% |
| Warehouse | 2 | 2% |
| Other | 11 | 10% |

region



| | | |
|-------------------|----|-----|
| Northland | 6 | 6% |
| Auckland | 36 | 34% |
| Waikato | 11 | 10% |
| Bay of Plenty | 6 | 6% |
| Taranaki | 7 | 7% |
| Gisborne | 0 | 0% |
| Hawkes Bay | 0 | 0% |
| Manawatu-Wanganui | 3 | 3% |
| Wellington | 4 | 4% |
| Tasman | 0 | 0% |
| Nelson | 1 | 1% |
| Marlborough | 0 | 0% |
| West Coast | 5 | 5% |
| Canterbury | 9 | 8% |
| Chatman Islands | 0 | 0% |
| Otago | 0 | 0% |
| Southland | 1 | 1% |
| Other | 3 | 3% |

HOFFE Member Update

Author **Lance Hunt** - HOFFE SIG Group Chair

Happy New Year to all FPANZ members I trust you are all rested and recharged for the challenges of 2015, this month's article is another example of the unbelievable lengths people will go to generate some income, compromising the safety of people and property!

Earlier this month FPANZ was notified directly by a commercial business of its concerns that a HOFFE service provider has approached them and undertaken a number of poor practises in regard to the installation and servicing of his portable fire equipment to NZS4503:2005.

Keith Blind and myself visited the customer to understand what had occurred, the client was very concerned that a Fire Protection service agent who portrayed himself as a fully trained and insured operator should be allowed to mislead and deceive business owners and put both his staff and business at risk of fire.

Upon reviewing documentation and a site audit we discovered the service provider had provided the client with second hand portable fire equipment which was beyond its service life and sold to the client as new. The provider was not NZQA qualified nor was he enrolled to be however had attended a FIRETECH course and was using this as evidence of qualifications.

The service provider was clearly not qualified or insured and to put it bluntly committed fraud. Obviously the customer was very concerned how this practise could possibly take place.

We assured the client that FPANZ do not tolerate this practice and our industry works to standards and codes and ethics are paramount. We promote and train our industry sectors and do not support such activity.

The client has now engaged the services of a FPANZ member where he can be assured things will be done correctly and the non-compliant equipment has been removed.

It is hard enough for our membership to prove the value of HOFFE and behaviour like this needs to be exposed to the industry, if anyone has experienced similar levels of poor service then let's share as it simply will not be tolerated. Upon further investigation this service provider has approached FPANZ to apply for membership late last year and had not been accepted our investigation continues and we will be contacting suppliers to review their product supply policy to non-professional service providers.

HOFFE Qualifications

HOFFE or Hand Operated Fire Fighting Equipment: this is a level 3 qualification offered by Competenz. It provides those gaining the qualification proof that they are capable and have the skills to not only service fire equipment but also the knowledge to correctly choose and install HOFFE as per NZS 4503:2005.

The qualification is made of 124 credits with a 24 month time frame for completion

For more information or advice on this qualification please contact John Stevenson at Competenz, email J.Stevenson@competenz.org.nz or phone 09 539 9888.



Inspectorates Special Interest Group

Author **Jason Godsmark** - Inspectorates SIG Group Chair

As the new kids on the Special Interest Group block a lot of you may be wondering how we came to be, who we are, what we are trying to achieve, and how we can help you.

How – during my time in the inspection business I have come across a number of curly questions, differences of opinions on how things should be done, and issues with what appears to be a lack of understanding on what is expected during surveys and inspections of new systems. Thinking that the other companies involved would have many of the same issues I approached Keith Blind at the FPA to sound out other Inspection companies with the view to sharing knowledge and improving the overall quality of inspections and systems installed.

Who we are: -- Keith did a wonderful job contacting other inspection companies and our initial meeting included representatives from six of the seven inspection companies currently working in New Zealand. With luck, we will have representation from all by the next meeting.

What are we trying to achieve? The purpose of this Sig Group is to openly communicate & discuss the common issues in the industry, improve communication and achieve some positive outcomes.

Along with other SIGs and the FPA we believe knowledge-sharing throughout the fire protection industry is key to improving system standards throughout New Zealand. As a part of this, we will be working with the FPA to run an Inspectorate based seminar series. If you have any specifics that you feel would be good or beneficial for us to cover, please drop Keith or myself an email.

What can we do to help you? Our first meeting was very productive and future ones will focus on providing forums for the wider industry to identify and query what the expectations are, and to get an authoritative opinion. To this end we have agreed that where a formal interpretation is sort, to clarify a segment of one of the standards, that the Inspectorate SIG will debate then forward the application with funding for these provided by the FPA.

Future items currently on the agenda to discuss include consistency of inspections, survey procedures, how to deal with some of the requirements of NZS4541:2013, installation issues, seismic, building interface testing and risk and responsibility. Please feel free to drop me an email with anything you would like us to discuss.

Protecting our Systems

Author **Todd O'Donoghue** - NZFS

An incident in January saw flooding in a number of Wellington shops due to a sprinkler pipe being ruptured while a level 1 shop was being stripped ready for outfitting.

A bulkhead collapsed during the work tearing the sprinkler pipe from the ceiling causing ceiling tiles to fall and extensive flooding to a ground floor bookshop, stationery store and cafe.

While in this case the incident appeared accidental due to the nature of the old wooden studs within the bulkhead, it raises the question of just how familiar building industry contractors are with fire protection systems.

As well as incidents such as the one above, a number of false alarms are caused each year from contractors working in close proximity to fire detection systems. In some cases these alarms

are from wiring being cut or from dust being created due to sanding in the area of smoke detection.

Are building owners and occupants also aware of these issues? If any of us are visiting sites where we notice building work is about to commence perhaps it is worth asking what steps are being taken to ensure the fire detection system is not affected by the work.

Incidents that cause false alarms or fire protection failures can have a negative impact on the industry even through no fault of our own. We all have the responsibility to ensure that public confidence in fire protection systems remains high by doing our bit to ensure the right people are educated about how to avoid incidents like the one above.



FREE Passive Fire Protection CPD Roadshow!

Back by popular demand, Productspec + Smartspec along with GIB, Hilti, and Dulux plus the help of FPANZ and the NZ Fire Service are taking the roadshow nationwide!

Architects, Designers, Engineers, Contractors, and other industry professionals are invited to join us to learn about the the design and construction of fire walls (GIB® systems), penetrating fire walls (Hilti Systems), and understanding surface finish properties (Dulux Systems).

At the completion of the session you're welcome to enjoy our hospitality and network with the NZ Fire Department Fire Engineers, attendees, and material suppliers.

Speakers:

- Kristina Watson, Hilti
- Heather Goode, Dulux
- NZ Fire Service Engineers
- Hamish Ewen, GIB

This session qualifies you for 25 NZRAB, 5 ADNZ, and 2.5 LBP CPD points.



| FEBRUARY EVENTS: | MARCH EVENTS: |
|---|--|
| AUCKLAND NORTH / QBE Stadium Monday 16 Feb / 3:00 - 5:30pm | WELLINGTON / Wharewaka Monday 16 March / 3:00 - 5:30pm |
| AUCKLAND SOUTH / Butterfly Creek Tuesday 17 Feb / 3:00 - 5:30pm | CHRISTCHURCH / Hagley Pavilion Tuesday 17 March / 3:00 - 5:30pm |
| HAMILTON / The Verandah Wednesday 18 Feb / 3:30 - 6:00pm | DUNEDIN / Dunedin Art Gallery Wednesday 18 Mar / 3:00 - 5:30pm |
| TAURANGA / The Tauranga Club Thursday 19 Feb / 3:30 - 6:00pm | QUEENSTOWN / Lake Hayes Pavilion Thursday 19 Mar / 3:00 - 5:30pm |

FREE REGISTRATION -
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Grievance sparked fire: Hundreds suffered for Angelo Bitossi's grievance against one man. Photo: MAARTEN HOLL/FAIRFAX NZ



No sprinklers at rebuilt facility

TALIA SHADWELL
POLICE

ALMOST \$10 million worth of prized possessions went up in flames, but a Wellington storage unit torched by an arsonist will not have a sprinkler system when it is rebuilt.

Angelo Dominic Bitossi was pursuing a grudge against Darren McKinley when he lit a fire in his former associate's Kiwi Self Storage unit on April 4 last year.

The blaze spread through a block containing about 224 units, bringing the cost of the collateral damage including to the Kilbirnie facility itself to about \$9 million, police estimated.

Many of the 300 victims were uninsured – their possessions irreplaceable. Heirlooms, collectibles, photographs and, in some cases, entire home contents were destroyed.

Bitossi, 35, claimed he was framed, but a High Court judge did not accept that and he was found guilty last December.

Bitossi's lawyer, Douglas Ewen, asked the judge to base the sentence less on the consequences of the fire and more on what Bitossi intended.

The month of April had a particular tragic significance for Bitossi. Ewen did not say why, but Bitossi's mother died in a car crash in late April 2003 in south Wairarapa. News reports at the time said Constance Bitossi, 55, was driving and Angelo Bitossi, who was a passenger, was injured.

In sentencing in the High Court at Wellington yesterday, Justice Simon France said that although the arson was targeted at McKinley, it was set recklessly, as Bitossi had left the storage unit door open

THE ARSON BY NUMBERS

JUSTICE Simon France told Angelo Bitossi there had been other arson attacks besides his that had caused a similar level of loss – in terms of cost or damage to historic buildings – “but the scale of personal loss and distress to over 300 people is unparalleled”.

He did not issue a victim reparation order as Bitossi could not pay.

■ Police said the combined loss suffered was more than \$9 million but did not know how much of that was covered by insurance.

■ Kiwi Self Storage was able to reunite about 360 affected customers with their belongings.

■ But those whose possessions were destroyed included Peter Fowler, who lost two units including a house lot of furniture and art valued at about \$50,000.

■ Sculptor Megan Ransom lost \$50,000 worth of tools and

- possessions.
- DJ Danny Lemon lost 8500 records in the blaze.
- DJ Brenden Robertson lost \$80,000 worth of possessions. His partner and mother of their children, Amy Hurrell, died from cancer 7 months after the fire.
- The court calculated the loss that could attract compensation but Kiwi Self Storage director Andrew Fraser calculated additional losses bringing the total to \$5m of which about \$560,000 will not be covered by insurance.
- That figure includes: The \$2.8m – covered by insurance – being spent on the facility's demolition and rebuild for reopening in August this year.
- The company had been earning around \$55,000 per month in Block B where the fire started and estimated the total revenue lost from the shortfall of occupancy will be around \$1.8m



All that remains: The charred Kiwi Self Storage in Kilbirnie.

- including an uninsured loss of \$500,000.
- The company has also spent \$150,000 on additional staff and security costs as well as the cost of arranging temporary storage for customers whose belongings survived the fire – \$60,000 of that will not be covered by insurance.

PROTECT YOUR POSSESSIONS

Consumer New Zealand chief executive Sue Chetwin emphasises that the Consumer Guarantees Act does apply to storage facilities. Companies do have to take reasonable care and skill to provide service such as having “secure adequate facilities – and obviously having sprinklers is a grey area”.

Storage providers are covered by a Self Storage Association of Australasia's industry standard storage contract which sets out the legal responsibilities of both parties. People are advised to scrutinise the contract, checking:

- Claimed limits to company's liability.
- Sale of insurance for consumer goods in storage (but check other providers for quotes).
- Contract length – how to extend.
- How to cancel – any cancellation
- Late payment fees (may be high).
- If cleaning charges apply when units vacated.

and a trail of petrol down the corridor.

Bitossi was sentenced to 8½ years' prison and must serve at least half of the term before he is eligible for parole.

Some victims of the arson have threatened legal action against Kiwi Self Storage, claiming it had not adequately protected their possessions.

The decision not to install sprinklers in a new facility had not been made lightly, director Andrew Fraser said. “After extensive research and consideration, we have decided that the building

will not have sprinklers because sprinklers are not in the best interests of our customers.”

Instead, the building would exceed fire code requirements, incorporating several separated fire cells with “the latest” smoke and heat detection systems.

Fraser pointed to costly water damage from burst sprinkler pipes in the BNZ building during Wellington's July 2013 earthquake and at Unity Books last week.

The greatest risk of fire to storage facilities was posed by arsonists, who could sabotage sprinklers, and were likely to use

an accelerant, making a fire too aggressive for sprinklers to quell, he said. “Wherever belongings are stored, they face a number of risks such as fire, theft, flood, natural disaster, riot or damage caused by terrorism or criminals. Beyond the measures that we have taken to make our buildings as safe as possible, we believe that insurance is the best way for customers to protect themselves from loss.”

The judge was given 56 victim impact statements yesterday.

Some people had property in storage because they had already

suffered a personal tragedy.

One victim, who read her statement to the court and wanted only to be known by her first name, Silke, said the aftermath of the fire “haunts” her and her fiancé, Florian. They had come to New Zealand about two months before the fire and had most of their belongings at Kiwi Self Storage.

They were not insured. She said losing their belongings had changed their lives. The couple had almost separated because of the fire, and had put everything on hold, including their wedding.

FPA FRIDAY FEBRUARY FISH-OFF FANTASTIC!



We have just completed our first FPA NZ fishing event, held on Friday the 13th February.

Tagged as the FPA NZ Fish-Off, the Fire industry was well represented with a mixture of keen fisherman who set off from Gulf harbour under cloudy skies. The ocean was choppy with a decent easterly swell underneath us, however we were ably skippered by Rex, and after an hour's steaming towards the Coromandel, we had some lines in the water.

First up, a Mako shark decided to pay us some attention – so it wasn't long before we decided to move on.

We settled into another spot and the tide was running, this set us up for the morning and we had the pleasure of catching snapper, tarakihi, cod and a few baby dogfish.



Shaun Clay with his prized snapper

The day was highlighted with a series of schools of dolphins that were causing the birds to work the water. We decided to follow the pod and dropped some line.

The catch of the day was made at this point with a double strike on the one line, (Shaun Clay managed to land a large snapper and a kingfish together!)

The photo above shows Shaun with his prized snapper, and the kingfish was let go for another day.

We had an awesome day on the water and the team had a chance to take some fish home, with the comments being "lets do this again".

- Keith Blind



FPANZ EVENT SCHEDULE 2015

Event Schedule February - July 2015

| | | |
|------------------------|--|-----------------------|
| 17th February 2015 | Passive Fire Protection CPD Roadshow | Auckland |
| 18th February 2015 | Passive Fire Protection CPD Roadshow | Hamilton |
| 18th February 2015 | Evac Group SIG Meeting | Auckland |
| 19th February 2015 | Passive Fire Protection CPD Roadshow | Tauranga |
| 19th February 2015 | Inspection Group SIG Meeting | Auckland |
| 20th February 2015 | Northern Region Contractors SIG Meeting | Auckland |
| 26th February 2015 | National Council FPANZ Board Meeting | Auckland |
| 16th March 2015 | Passive Fire Protection CPD Roadshow | Wellington |
| 17th March 2015 | Passive Fire Protection CPD Roadshow | Christchurch |
| 18th March 2015 | Passive Fire Protection CPD Roadshow | Dunedin |
| 19th March 2015 | Passive Fire Protection CPD Roadshow | Queenstown |
| 26th - 27th March 2015 | FPA Australia Conference | Gold Coast, Australia |
| 19th - 22nd April 2015 | BOINZ - Akl Conference | Auckland |
| 20th April 2015 | HOFFE Group SIG Meeting | Auckland |
| 21st April 2015 | Passive Group SIG Meeting | Auckland |
| 22nd April 2015 | Evac Group SIG Meeting | Auckland |
| 23rd April 2015 | Inspection Group SIG Meeting | Auckland |
| 24th April 2015 | Northern Region Contractors SIG Meeting | Auckland |
| 4th - 8th May 2015 | Seminar Series: Innovate your Business | Auckland |
| 14th May 2015 | National Council FPANZ Board Meeting | Christchurch |
| 8th - 12th June 2015 | Seminar Series Training: TBA | Auckland |
| 15th June 2015 | HOFFE Group SIG Meeting | Auckland |
| 16th June 2015 | Passive Group SIG Meeting | Auckland |
| 17th June 2015 | Evac Group SIG Meeting | Auckland |
| 18th June 2015 | Inspection Group SIG Meeting | Auckland |
| 19th June 2015 | Northern Region Contractors SIG Meeting | Auckland |
| 16th July 2015 | National Council FPANZ Board Meeting | Auckland |
| 20th - 24th July 2015 | Seminar Series Training: TBA | Auckland |

Improved Safety Charter website up and running.

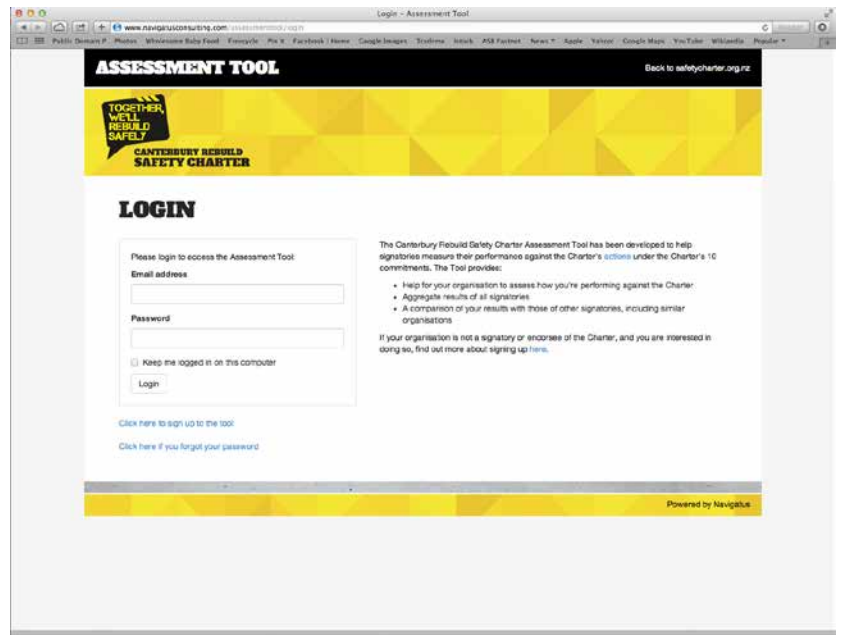
We are pleased to announce that the new and improved web-version of the Canterbury Rebuild Safety Charter assessment tool, including the aggregate results from the tool, are now online and ready to use.

As the key Charter performance person for your organisation, go to <http://www.navigatusconsulting.com/assessmenttool/login> provide your details, a password and use the authentication code (65ah12kd) to register. Once registered, an email will be automatically sent to you that will require you to click on a link to confirm your registration. You will then need to send an email to the Charter's administrators at info@safetycharter.org.nz requesting access as a key Charter performance person. The Charter's administrators will then confirm by email when you have been given access as a key Charter performance person..

Being a key Charter performance person will allow you to:

1. Edit the company information (size and type of the company)
2. Undertake Charter assessments
3. Assign access to the tool to your organisation's staff and contractors
4. View the report information.

The following pages provide further information on how to sign into the tool and details of how to use it. We suggest as a first step you familiarise yourself with the tool and assign access to your organisation's staff and contractors, as your organisation sees fit.



Carrying out an Assessment

Once you have familiarised yourself with the tool we are asking all Charter signatories to undertake an assessment using the new tool by 28 February 2015. Assessments are for signatories to assess their Charter performance and are not a requirement for endorsees. While some signatories will have completed the tool in 2014, we would like you to carry out the assessment again using the new tool and the detailed guidelines that have been developed to help signatories assess their Charter performance. You can access the detailed guidelines here in the tool.

Completing the assessment will give signatories and the Charter Working and Steering Groups, a better and more accurate understanding of current Charter performance. It will also help your organisation to improve your Charter performance. To support signatories to improve their Charter performance, we will be developing a "Charter Performance Plan" template in the coming months.

For any technical problems in accessing the tool please contact Celia Cunningham at c.cunningham@navigatusconsulting.com or ph 09 282 4519. For any other issues please email info@safetycharter.org.nz.

We look forward to seeing your completed assessment tools come through the new system.

Graham Darlow

Chair of the Rebuild Charter Health and Safety Steering Group

Fire Safety isn't something you would take a gamble on, is it?

Next time you need advice, servicing, installation, or fire protection products, there's a simple way to ensure you are dealing with professionals with the relevant training, knowledge, ethics and responsibility critical to the safety of lives and the protection of property.

The way to ensure you are not taking an unnecessary gamble with lives, property, or fire safety is to **choose a member of the Fire Protection Association of New Zealand**.

FPANZ members are proud to belong to an Association which:

- Sets the standards for the Fire Safety Industry in New Zealand
- Ensures its members operate to professional Codes of Practice and Ethical Conduct
- Pursues continuous professional development for members and their staff
- Has established high-level formal relationships with the New Zealand Fire Service, Government agencies, International Fire Associations and the wider community
- Is active in the ongoing development and review of Fire Codes and Standards.

The Fire Protection Association of New Zealand (FPANZ) is a not-for-profit Incorporated Society governed by a constitution and Board of Directors, with its national head office based in Auckland. The Association is the voice of the industry and responsible for these key areas in the industry:

Code of Ethical Conduct

Under the Association's constitution, all members and companies are bound to the Code of Ethical Conduct. Our members are committed to operating to best practice, and are accountable to the Association for their performance. All members are subject to a fully-documented complaints and disciplinary procedure.

Vetting

All prospective new members of FPANZ must supply detailed information on their company, staff and market activities, including customer references. Additional background checks are also done, then all information is reviewed by the Board of Directors to establish that the applicant meets the requirements to become a member of FPANZ.

Insurance

One of the other benefits of dealing with a member of FPANZ is that all members must carry a minimum of two million dollars in public and product liability insurance.

Promoting Industry Training and Education

The Fire Protection Association of New Zealand works closely with key stakeholders: Competenz, FireTech, and its members to ensure the industry is providing continuous industry development and relevant training to staff.

Special Interest Groups

FPANZ Special Interest Groups (SIGs) provide a forum for sub-groups of members to keep abreast of the latest issues affecting their particular discipline, and to ensure that sector-specific issues and concerns are addressed in a timely and professional manner.

For more information or to confirm if your Service Provider is a FPANZ Member, visit our website www.fireprotection.org.nz

or contact: Fire Protection Association NZ, Phone: +64 9 414 4450; Email fpanz@fireprotection.org.nz

To make sure you're not leaving it up to a game of chance, ask your service provider if they are a member of the Fire Protection Association of New Zealand.



DELIVERING A FIRE SAFE FUTURE

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COMPLIANCE & APPROVAL

WEDNESDAY 25 & THURSDAY 26 MARCH 2015
GOLD COAST CONVENTION & EXHIBITION CENTRE

15
FIRE AUSTRALIA
CONFERENCE & EXHIBITION

**PROGRAM &
REGISTRATION**

www.fireaustralia.com.au

HOST



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THE CONFERENCE

FIRE AUSTRALIA 2015 IS THE PREMIER FIRE PROTECTION INDUSTRY CONFERENCE, ATTRACTING A WIDE RANGE OF REPRESENTATION FROM BUSINESSES, GOVERNMENT AND FIRE SAFETY PRACTITIONERS.

Regular attendees to the conference will notice it has moved from a November schedule to March. This is to move away from peak conference season, thus providing more industry personnel the opportunity to attend.

Building on the success of the last conference and exhibition, Fire Australia 2015 will once again provide delegates the option of attending multiple streams over the course of both days. The streams will provide a mix of presentations focussing on industry wide and industry specific topics. The industry specific streams will cover the key industry sectors of early warning and detection, fire suppression, passive fire protection, emergency management, maintenance and bushfire. Presentations will address current issues, industry direction and challenges and technical content relevant to those with an involvement in the fire protection industry.

The exhibition will once again be a main feature of the event, located central to all aspects of the conference. Sponsors and Exhibitors have the opportunity to present on their products and services within the exhibition hall. These presentations will occur during breaks in the plenary sessions.

With speakers from across Australia and overseas, the organisers aim to ensure all presentations are topical and current, affording attendees across all roles in the fire protection industry additional knowledge and information.

DELIVERING A FIRE-SAFE FUTURE

To ensure fire-safe buildings and infrastructure, a robust fire safety strategy must be supported by reliable fire protection systems and equipment demonstrated to be fit-for purpose. This requires that decisions on building concept design and the selection of fire safety equipment and systems are right from the very first stages of a project. When a system or technology is poorly designed, incorrectly selected and improperly installed, commissioned and certified, the impacts of these actions affect the safety of the building's occupants and the building itself. There may be major problems during maintenance and an impact throughout the life cycle of the building or piece of infrastructure. Potential failure of equipment, construction elements or systems could occur which may result in loss of lives and property and significantly increase the legal liability of all involved in the supply chain from manufacturers through to installers and ultimately building owners.

The theme of Fire Australia 2015 focusses on making an informed choice about product selection, ensuring fire safety systems and equipment are fit- for- purpose once installed. This will ensure dependable and cost effective fire protection throughout the life span of the building or infrastructure. One of the key aspects of any system is using the right products for the right circumstances in the right way.

The conference will highlight issues of product and system approval methods including evidence of suitability options in the market place and the differences between them. It will also look at the technologies we adopt and adapt to the Australian market, as well as how we compare with other countries on an international scale for design, testing, certification and approval.



THE EXHIBITION

The exhibition is the central component of Fire Australia attracting a large number and wide cross section of trade show attendees.

Access to the trade show will be free to maximise attendance and provide exhibitors with additional avenues to generate brand awareness and new business.

All components of the conference will feed off the exhibition area and reference to the exhibition will be made throughout the conference proceedings. The space will also house a café style catering area and a meet the speaker lounge. Full exhibitor listing and floor plan is published in the Conference Program and website.

PRODUCT PRESENTATIONS

Product presentation positions are available to sponsors and exhibitors at Fire Australia 2015. These ten minute sessions will be held within the plenary halls to ensure maximum exposure to delegates. An application form will be sent as part of the exhibitor kit or sponsorship agreement.

ATTENDEES

Fire Australia predominantly draws delegates from all states and territories of Australia as well as from New Zealand and the Asia-Pacific region. The conference format will ensure industry issues are professionally presented and a strong attendance of industry personnel is expected, including:

- Fire Equipment Manufacturers, Distributors and Installers
- Fire Protection Technicians
- Fire Consultants and Engineers
- Facility Managers, Property Developers and Building Owners
- Fire Service Personnel
- Regulatory Authorities and Legislators
- Insurance Professionals
- Architects, Building Designers and Specifiers
- Building Surveyors
- Environmental Engineers & Sustainability Managers

CONFERENCE SPONSORS

PLATINUM



GOLD



DINNER



SATCHELS



IDENTIFICATION



CAFÉ AREA



STATIONERY



For more information and to register your place at the conference, go to www.fireaustralia.com.au



CONFERENCE DINNER

VENUE Jupiters Hotel & Casino – Pavilion Marquee Broadbeach Island, Broadbeach

DATE Wednesday 25 March 2015

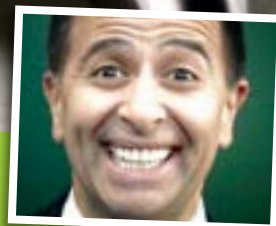
TIME 6:30pm for 7:00pm - 11:00pm

COST \$150 per person – One ticket included with full conference registration

This night of networking and fun is an opportunity to relax and enjoy time with your industry colleagues and friends with some entertainment thrown in. The night will include a sumptuous three course meal, accompanied by a selection of wines, beers and soft drink.

Please note: Tables of 10 can be reserved and will receive preferred positioning within the ball room. Contact the FPA Australia events team for more information.

The MC for the night will be Vince Sorrenti, one of Australia's best-known and leading comic entertainers. Performing at over 200 events a year, Vince is known for his ability to take a topic and turn it into a laugh fest. His work runs the gamut from TV hosting, movie appearances, comedy albums and festival performances. He is a four-time winner of the Mo Award as Australia's best comic and as a writer he has won a Gold medal at the New York Film Festival. With Vince on hand it is sure to be one entertaining night!



DAY 1 PROGRAM

WEDNESDAY 25 MARCH

PRODUCT COMPLIANCE STREAM

Welcome & Official Opening

Platinum Sponsors Welcome

KEYNOTE SPEAKER

Stephen Kip – *SKIP Consulting – Fire Safety Engineer & Building Regulatory Consultant*

Alternative Solutions, Deemed-to-satisfy provisions, product certification & accreditation – how to ensure product compliance in a national marketplace

KEYNOTE SPEAKER

Don Bliss – *National Fire Protection Association (USA) - Vice President, Field Operations*

Product testing, certification and suitability – The US approach to this critical fire safety issue

Panel Session

Morning Tea

John Thorpe – *CertMark International – CEO / Director*

Performance based Certification of Fire Protection Systems and Products

Abby So – *FM Approvals – Manager, Asia Pacific*

The Importance of Certification to Delivering a Fire Safe Future

Will Marshall – *AECOM – Principal Engineer, Fire & Risk*

The Performance Based Code Mindset

Panel Session

Lunch

Greg Buckley – *Fire and Rescue New South Wales*

Ron Lawson – *Insulated Panel Council of Australasia (IPCA) – CEO*

John Clampett – *John Clampett Consulting – Director*

Industry developing its own Code of Practice working with the Fire Brigades. The Insulated Sandwich Panel Code of Practice

Benjamin Hughes-Brown – *Ignis Solutions – Director*

Performance Solutions and Product Certification – Mapping the foundation

Panel Session

Afternoon Tea

KEYNOTE SPEAKER

James Golinveaux – *Tyco Fire Protection Products – Senior Fellow, Water Fire Suppression*

The Changing Face of Warehouse Commodity Classifications – Its Impact to Achieving a Fit for Purpose & Compliant Fire System

KEYNOTE SPEAKER

Robert James – *UL LLC – Regulatory Services Manager*

How US construction codes and standards work together to help enable safe and long lasting buildings

Panel Session

Closing Comments

The conference program is subject to change due to circumstance and the discretion of the organising committee.

INDUSTRY SPECIFIC STREAM

Morning Tea

FIRE SUPPRESSION

James Golinveaux – *Tyco Fire Protection Products – Senior Fellow, Water Fire Suppression*

Home Sprinklers - Delivering a Better Fire-Safe Home

Michael Billstroem – *The Reliable Automatic Sprinkler Company INC – Director of International Technical Service*

Why in-rack sprinklers?

Dwayne Smith – *Norman Disney & Young – Associate Manager, Fire Protection/Fire Safety Engineering*

Preventing Environmental Disaster following a Fire Suppression System Discharge

Panel Session

Lunch

MAINTENANCE

Andrew Tegart – *Deanmac Emergency Services – Director*

John Macleod – *Deanmac Emergency Services – Fire Engineer*

Microbiologically Influenced Corrosion – How it Impacts Fire Suppression Systems

Jonathan Barnett – *RED Fire Engineers – Technical Director*

Alistair Nicol – *LINKfire – Managing Director*

Maintenance challenges for complex fire engineered buildings

Panel Session

Afternoon Tea

EARLY WARNING & DETECTION

Dr Peter Meikle – *Xtralis – VP Business Development*

Innovations in very early warning & detection

Paul B. Leslie – *Xtralis – Product Line Management, ASD Codes & Standards*

Getting the System Design Right – A Case Study

Panel Session

Closing Comments

DAY 2 PROGRAM

THURSDAY 26 MARCH

PRODUCT COMPLIANCE STREAM

Welcome & Housekeeping

Michael Ziegler – *The Tasman Tank Co. – Sales Manager*

An overview of the key aspects of AS2304-2011 Water Storage Tanks for Fire Protection Systems

Andre Mierzwa – *FM Global – Australian Operations Chief Engineer*

The New Way of doing Fire Protection Research

Panel Session

Morning Tea

Dr. Christopher Preston – *CSIRO Infrastructure Technologies – Team Leader, Fire Systems*

Dealing with ambiguities in test standards during product testing

Keith Nicholls – *Exova Warringtonfire – Manager Australian Product Testing and Assessments*

Subtleties of Fire Testing and Compliance with the NCC

Mark Burgess – *CSIRO – Director, Technical and Testing Services*

David Whittaker – *CSIRO – Executive Officer of ActivFire Scheme*

Is it approved? Exploring ambiguities in evidence of product conformity

Panel Session

Lunch

Matthew Wright – *FPA Australia – Chief Technical Officer & Deputy CEO*

FPA Australia's plans to assist decision makers make an informed choice about product selection to ensure fire safety systems and equipment are fit-for-purpose once installed

Forum Q&A

Afternoon Tea

KEYNOTE SPEAKER

Hank Van Ravenstein – *Department of Human Services – Principal Manager, Fire Risk Management Unit*

Fire Safety Systems, what is the pitfalls of certification

Conference Wrap and Outcomes – FPA Australia

Awards & Resolutions

Closing Comments

INDUSTRY SPECIFIC STREAM

Welcome & Housekeeping

BUSHFIRE

Bronwyn Foord – *Window & Door Industry Council – General Manager*

Bushfire tested windows & doors – The manufacturers perspective

Javad Hashempour – *University of Southern Queensland – PhD Candidate*

Bushfire traps – the application of mesh screens to contain bushfires

Panel Session

Morning Tea

Cormac Farrell – *Aurecon – Environmental Scientist*

Combining multiple bushfire behaviour models for improved hazard assessment

Mark Hawkins – *NSW Rural Fire Service – A/Senior Policy Officer, Planning & Development*

Planning for Bushfire Protection – Developing a new framework

David McMonnies – *Building Code & Bushfire Hazard Solutions – Managing Director*

Chris Wyborn – *FPA Australia – Engagement & Education Manager*

Bushfire sprayers – can we improve the standard

Panel Session

Lunch

PASSIVE FIRE PROTECTION & EMERGENCY MANAGEMENT

Tass Georgas – *Metropolitan Fire & Emergency Services Board – Manager, Community Safety Technical Department*

Darren Conlin – *Metropolitan Fire & Emergency Services Board – Manager, Building Inspection & Compliance*

Formulating an acceptable design strategy in response to crisis events and terrorism threats for Australia's built environment

Alex Webb – *CSIRO Infrastructure Technologies – Group Leader*

Combustible building facades – does the regulatory tension between energy efficiency and fire safety need a release?

Panel Session

Afternoon Tea

The conference program is subject to change due to circumstance and the discretion of the organising committee.

For more information and to register your place at the conference, go to www.fireaustralia.com.au



INCLUSIONS AND NOTES

REGISTRATION INCLUSIONS

The table below illustrates the inclusions for the different types of attendance at Fire Australia 2015. All Costs can be found on the included registration form.

| | FULL DELEGATE | SINGLE DAY | INDUSTRY SPECIFIC SESSION(S) | TRADESHOW ONLY |
|--|---------------|------------|------------------------------|----------------|
| Conference Booklet | ✓ | ✓ | ✓ | ✓ |
| Product Presentation Access | ✓ | ✓ | ✓ | ✓ |
| Trade Show Access | ✓ | ✓ | ✓ | ✓ |
| Industry Specific Stream Presentations | ✓ | ✓ | ✓ | |
| Product Compliance Stream | ✓ | ✓ | | |
| Proceedings USB (all slides)* | ✓ | ✓ | | |
| Delegate Satchel | ✓ | ✓ | | |
| Tradeshow Bag | | | ✓ | ✓ |
| Full Day Catering | ✓ | ✓ | | |
| Single Catering Voucher | | | ✓ | |
| Conference Dinner Ticket (x1) | ✓ | | | |

CONTINUED PROFESSIONAL DEVELOPMENT (CPD)

Complete a form at the conference or contact the Conference Administrator after Fire Australia 2015 to receive a certificate of attendance. Please note these are only available to those attending the Industry Specific and/or Product Compliance presentations.

DRESS CODE

Business casual or neat casual attire is recommended.

CANCELLATION POLICY

All cancellations must be made in writing to the Conference Administrator. If received by Friday 6 March 2015 a full refund less an administration fee of \$66 will be made. If received after this date, no refund will be made but substitutes will be permitted.

For more information and to register your place at the conference, go to www.fireaustralia.com.au



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Fire Australia 2015

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E events@fpaa.com.au
W www.fpaa.com.au



FA15 REGISTRATION / TAX INVOICE

Visit the conference website (fireaustralia.com.au) to register online and to download the multiple delegate registration form.

YOUR DETAILS

| | | | | |
|----------------------|---------|----------|---|---|
| Name | | Date | / | / |
| Position | Company | | | |
| Address | | | | |
| Suburb | State | Postcode | | |
| Phone | Mobile | | | |
| Email | | | | |
| Special Requirements | | | | |

ATTENDANCE OPTIONS

| | | Member | Non-Member |
|---|--------------|----------------------------------|----------------------------------|
| FULL DELEGATE Full access to both days plus the dinner function | Early Bird | <input type="checkbox"/> \$990 | <input type="checkbox"/> \$1,190 |
| | After 13 Feb | <input type="checkbox"/> \$1,190 | <input type="checkbox"/> \$1,430 |
| SINGLE DAY DELEGATE Full access to selected day | Early Bird | <input type="checkbox"/> \$475 | <input type="checkbox"/> \$575 |
| | After 13 Feb | <input type="checkbox"/> \$575 | <input type="checkbox"/> \$675 |

All prices include 10% GST.
See page 8 of the Registration Brochure for inclusions.

Will you attend the Conference Dinner? ☐ Yes ☐ No

Which day will you attend? ☐ Wed ☐ Thu

| INDUSTRY SPECIFIC SESSION(S) – A single session plus catering break | | | Early Bird | | After 13 February | |
|---|----------------------|-----------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| | | | Member | Non-Member | Member | Non-Member |
| Fire Suppression | Day 1 (Wednesday 25) | Morning | <input type="checkbox"/> \$165 | <input type="checkbox"/> \$195 | <input type="checkbox"/> \$195 | <input type="checkbox"/> \$235 |
| Early Warning & Detection | Day 1 (Wednesday 25) | Afternoon | <input type="checkbox"/> \$165 | <input type="checkbox"/> \$195 | <input type="checkbox"/> \$195 | <input type="checkbox"/> \$235 |
| Maintenance | Day 1 (Wednesday 25) | Afternoon | <input type="checkbox"/> \$165 | <input type="checkbox"/> \$195 | <input type="checkbox"/> \$195 | <input type="checkbox"/> \$235 |
| Bushfire (double session) | Day 2 (Thursday 26) | Morning | <input type="checkbox"/> \$295 | <input type="checkbox"/> \$355 | <input type="checkbox"/> \$355 | <input type="checkbox"/> \$395 |
| Passive Fire Protection & Emergency Management | Day 2 (Thur. 26) | Afternoon | <input type="checkbox"/> \$165 | <input type="checkbox"/> \$195 | <input type="checkbox"/> \$195 | <input type="checkbox"/> \$235 |

| | | |
|---|---|--|
| OTHER / ADDITIONAL TICKETS / ITEMS | Tradeshow Only – Includes access to free Product Presentations <input type="checkbox"/> FREE | Proceedings USB <input type="checkbox"/> \$250 |
| | Additional Conference Dinner Ticket – 1 included with Full Delegate Registration <input type="checkbox"/> \$150 | |

METHOD OF PAYMENT (FPA AUSTRALIA – ABN 30 005 366 576)

NOTE: Payment is required for registration to be accepted, all payments must be received prior to the conference. Details on the cancellation policy are included on Page 8 of the Program & Registration brochure.

| | | |
|--|--|---|
| Total of all options selected above = \$ | <input type="text"/> | BOOK EARLY & SAVE! |
| <input type="checkbox"/> EFT Payment | FPA Australia BSB 033 083 ACCT 332 932 | Reference "FA15 + Company or Your Name" |
| <input type="checkbox"/> Cheque | Payable to FPA Australia | |
| <input type="checkbox"/> AMEX | <input type="checkbox"/> VISA | <input type="checkbox"/> MasterCard |
| Card No. | <input type="text"/> | Expiry <input type="text"/> / <input type="text"/> Amount \$ <input type="text"/> |
| Name on Card | <input type="text"/> | Signed <input type="text"/> |

PLEASE FORWARD YOUR COMPLETED FORM WITH FULL PAYMENT TO:

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Fire Prevention and Protection Systems

R. J. FRASER*

B.E., C.ENG., A.M.I.MECH.E., A.S.F.P.E., (MEMBER)

1. INTRODUCTION

THE need to understand and apply fire prevention and protection principles throughout the community is of the utmost economic importance and is essential to protect life. All practising engineers, whatever their branch of the profession, can be involved in decisions leading to safe or unsafe fire prevention and protection practices.

The Fire Protection Association of the U.K. recently said:

Three hundred years ago plague ravaged an older London. The Great Fire in the following year, disastrous as it appeared in 1666, has since been popularly regarded as putting a final end to the plague—a necessary cleansing agent. Today, effective sanitation and attention to hygiene are so much a part of life that plague is no longer a risk. But to judge from the havoc we still permit fire to wreak, the inhabitants of town and country might still be thought to look on flame as the great purgative of squalor and disease. Three hundred years later it is fire, not disease, which remains rampant and dangerous.

It is the very inevitability of the spread of disease—under unhealthy conditions—that has made sanitation one of the foremost considerations of civilised society. The spread of fire, under favourable conditions, is also inevitable. But the elimination of fire still receives far too scant attention. Is it really a matter of fundamentals? A child learns to wash itself and to attend to personal hygiene at such an early age that these functions become part of its nature. How many children learn to protect themselves and their belongings from fire, and carry this knowledge into their adult life?

Fire protection, if it is going to be successful, needs to be as simply applied as the child learning to keep itself clean. If we grow up with instinctive knowledge of how to prevent fire, then there will be far less need to apply corrective measures.

2. FIRE BRIGADE SERVICES

The fire brigade services throughout New Zealand are highly trained in fire fighting and well equipped with modern appliances and equipment, but they must have early alarms and sufficient water if they are to prevent major conflagrations. Thus they depend on current engineering practice to provide:

(a) Fixed detection or detection and protection systems in buildings.

(b) Adequate access to buildings for rescue and for fire-fighting operations.

(c) Sufficient water supplies close to each building and readily available for immediate attack on a fire.

(d) Building construction that will withstand fire conditions without collapsing or endangering the lives of fire-fighters.

For the provision of systems under (a) above, the owner or occupier of a building must reach a decision, guided by his architects and engineers, on the fire risk involved in the particular type of occupancy. These systems are supplied by recognised contractors in the fire protection engineering industry, and the alarm circuits to the brigade station without exception use N.Z. Post Office circuits from telephones, fixed installations, and street alarm boxes.

Item (b) is influenced by local body codes in regard to access and egress requirements, window openings and fire escapes. Under-width streets, buildings over 100 ft high, and curtain wall and fixed window buildings also determine the extent of rescue operations from turntable ladder appliances.

Item (c) depends on local bodies to comply with regulations and maintain street hydrants in good working order on water mains with sufficient effective diameter fed from unlimited sources of supply. The normal practice is to connect a lead from a street hydrant to the suction of a fire appliance pump which provides boosted and controlled supply to one or more hose lines. These pumps are generally of 500 gal/min capacity. With building 100 ft or more high, the problem of getting men and equipment to the higher floors becomes a major factor requiring either special lift arrangements or wet/dry riser systems internally. In the five main cities of New Zealand 100 ft turntable ladders are available for rescue and fire-fighting operations where the streets are wide enough, not too steep, and not congested with live overhead electrical wires.

The conditions arising in a fire that affect item (d) are discussed below.

3. THE NEED FOR FIRE PROTECTION

All building owners and occupiers must recognise:

(a) The need to protect lives.

(b) The economic need to protect against loss of stock, property or investments, and business livelihood (this is generally achieved through insurance).

(c) The need to protect buildings from structural damage.

Indirect losses to both employers and employees arising from fire, although their evaluation in monetary terms is impossible, are often far more serious than property damage. So are the community losses suffered by the community as a whole, such as the effects on suppliers of materials and services to the affected business, and the possible unemployment caused by the fire.

*Manager, Wormald Brothers (N.Z.) Ltd., Auckland.

The fire risk in any building arises through one of the following causes: (a) occupants and their careless actions; (b) building services, such as electricity or heating; and (c) the type of operations for which the building is used.

Electrical services figure prominently in the statistics of fire causes, but such abuses as overloading or the use of over-heavy fuses arise from the careless actions of people. How dramatically people's attitudes can affect fire risks was shown in the recent report of a U.K. team that visited the U.S.S.R. in 1964: the team found that people there were much more fire-prevention conscious than in the U.K., with the result that the fire loss rate per head in the U.S.S.R. was only one tenth of that in the U.K.

The careless discarding of cigarette butts is probably the greatest cause of fires today throughout New Zealand, and in fact the world. The disastrous results often occur many hours later when buildings are unoccupied and therefore detection is delayed.

Experience in the U.S. and Canada is very well recorded by the National Fire Protection Association *Handbook of Fire Protection* with thorough analysis of causes, contributing factors, loss of life, etc. We in New Zealand can study these facts with the sure knowledge that proportionally the same losses may happen here; our current development and building construction have many similarities, but our much less severe climatic conditions save us many problems.

4. OCCUPANCY RISKS

Subdivision of building occupancies into finite groupings is impracticable but it is possible to determine from fire statistics those which have higher incidence and those which involve life more than property or vice versa.

Residential risks in New Zealand are outside the scope of this paper, but the trend to multistory apartment blocks now presents a need for careful assessment of the problem of access and egress for tenants.

Hotels, hospitals, and offices form a group which involves the protection of lives in buildings of variable construction, but the group is normally considered to be in the "light hazard" class. Manufacturing workrooms and most industry involve varying degrees of risk and are at present considered to be in the "ordinary hazard" class, with certain "high hazard" exceptions—such as paper storage, rubber manufacturing or storage, and woodworking factories—which will give a heat release of 4,000 Btu per minute per square foot of floor area. Finally aircraft storage and workshop operation hangars are in the "extra hazard" class.

A much more definite pattern is emerging in the U.S., where the practice is to be more specific and define the extent of the risk much more closely. The writer believes that U.K., Australian, and New Zealand practice will soon be revised along similar lines.

The term "fire load" has been introduced to define the fire risk more accurately. For example, a

wool store or timber store will have greater potential heat in pounds per square foot than the same building with metal machinery.

The standard A.S.T.M. time/temperature curve normally accepted as a basis for testing fire ratings and appraising materials is shown in Fig. 1. Although this is representative of many fires it cannot be interpreted as representative of every fire, and recent investigation in Canada shows that under some conditions 3 lb/ft² fire load of cellulosic material (6,000 to 8,000 Btu/lb) will produce temperatures considerably above the curve. Again, in a recent school fire in Los Angeles a fire load of 4 lb/ft² produced temperatures of 1,950°F, which approaches a 4 hour fire exposure on the time temperature curve, yet from the table of estimated fire severity given by the N.F.P.A.(1), and shown here as Table 1, this load would be only estimated as a 30 minute fire.

The spread of flame can be inhibited by additives or impregnation in the course of manufacture, but under exposure to fire these treated materials will still contribute fuel to the fire. Smoke produced by a fire will vary with the type of fuel involved; toxic gases are generated by some plastic materials, so that risk to life of occupants or firefighters is immediately involved.

Recent medical research indicates that the human body cannot withstand as much exposure to hot fire gases, hot air, or oxygen-deficient fire gases as was previously thought, and most deaths in fires are from such effects long before physical burning occurs—the exposure time before asphyxiation is seconds only. A person who is exposed to a 1.28% concentration of carbon monoxide in the air will

TABLE 1
Estimated Fire Severity for Offices and Light Commercial Occupancies

Data applying to fire-resistive buildings with combustible furniture and shelving.

| Combustible contents ^a (lb/ft ²) | Assumed heat potential† (Btu/ft ²) | Equivalent fire severity‡ (hours) |
|--|---|--------------------------------------|
| 5 | 40,000 | $\frac{1}{2}$ |
| 10 | 80,000 | 1 |
| 15 | 120,000 | 1½ |
| 20 | 160,000 | 2 |
| 30 | 240,000 | 3 |
| 40 | 320,000 | 4½ |
| 50 | 380,000 | 7 |
| 60 | 432,000 | 8 |
| 70 | 500,000 | 9 |

^aTotal, including finish floor and trim.

†Heat of combustion of contents taken at 8,000 Btu/lb up to 40 lb/ft², 7,600 Btu/lb for 50 lb/ft², and 7,200 Btu/lb for 60 lb/ft² and more to allow for relatively greater proportion of paper. The weights contemplated by the table are those of ordinary combustible materials, such as wood, paper, or textiles. The relative heat potential values of various materials is shown in Table 6-191 of reference 1, from which estimates may be made of probable fire severity where materials have different values.

‡Approximately equivalent to that of test under standard curve for the periods shown.

become unconscious after two or three breaths and probably die in one to three minutes, although many variables—such as physical condition, amount of exertion, and presence of other toxic gases—will affect the amount of carbon monoxide that can be tolerated without causing death.

Buildings that are fire-resistant in themselves may not protect lives or property within for a number of reasons, such as the design of services ducts, stair and lift wells, or door and window openings.

5. LOCAL BODY RESPONSIBILITY FOR WATER SUPPLIES

The Fire Services Act 1949 and subsequent amendments established urban fire authorities and the Fire Service Council to provide national control of the fire services. In terms of this authority, the Fire Service Council issues codes of practice on training, equipment, etc. and classifications for water supply requirements such as Code of Practice 1965/30. (Appendix A to this paper is an extract of requirements issued by the Auckland Metropolitan Fire Board.)

6. FIXED FIRE-PROTECTION SYSTEMS RELATED TO LOCAL BODY CODES

N.Z.S.S. 1900, Chapter 5, has become the accepted guide for most engineers although the by-laws of some local bodies do not specifically include it. Relevant sections are:

Clauses 5.10.4 and 5.10.5, which permit fire compartments areas to be increased if automatic sprinklers are installed. With the current manufacturing demands for large open areas this aspect of the code is very important to occupiers. The efficiency of such a protection system is discussed in section 7 below.

Clause 5.12.6 allows variations in external wall openings and construction materials if automatic water drencher systems are used. Drencher systems may also be approved for use in stair wells and associated with protection of openings in fire walls.

Clause 5.22.7 provides for automatic closure of escalator openings by smoke-detection systems releasing self-closing steel roller shutters in the balustrading, or alternatively for protection by additional automatic sprinkler heads when the escalator is located in a building fully protected by an automatic sprinkler system.

Clause 5.53.2 requires an automatic alarm complying with N.Z.S.S. 1299 either audible or visible for alerting staff in hospitals, accommodation houses, hotels, etc.

Clause 5.71.1 covers the requirements of dampers in ducts associated with places of assembly, but is today relevant in air-conditioning any building.

Clause 5.74 calls for fixed systems in theatres.

The most important point arising is the flexibility allowed by N.Z.S.S. 1900 where fixed fire-protection systems are installed—this not only extends to alternative types of construction, cladding, and the elimination of fire compartments, but includes

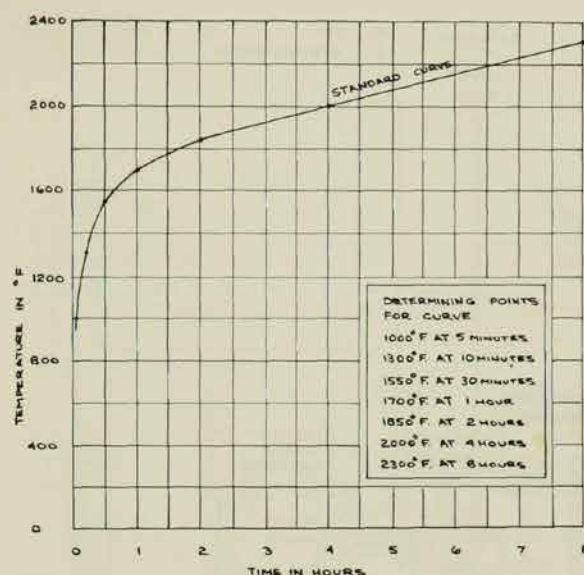


Fig. 1: The standard A.S.T.M. time-temperature curve.

variations to the enclosure of stair wells, lift shafts, etc. Dispensations on fire ratings on exposed steel-work and structural members in lightweight construction will affect the overall costs of such buildings.

7. AUTOMATIC SPRINKLER SYSTEMS

7.1. Historical

Those preparing the variations to codes outlined in the preceding section have based their recommendations on the proven effectiveness of automatic sprinkler systems over the last 75 years.

The beginning of automatic sprinkler systems can be traced back to the earlier nineteenth century, when the cotton-spinning industry presented serious fire risk. The earliest system known in New Zealand was shipped out from England with the milling machinery for the Northern Roller Milling Company installation in Quay Street, Auckland, in 1888. The building has just been demolished for redevelopment purposes.

In 1880 the modern approach to a fusible sprinkler head was patented by Fredrick Grinnell. Installations completed in 1898 are still in full service in several existing buildings in the main centres of New Zealand.

7.2. Construction

An automatic sprinkler system comprises a system of fixed pipework to fusible heads located at regular spacing so that each covers a floor area of approximately 80 to 100 ft². The pipework is supplied with water from a permanent source, such as town mains, private storage reservoirs at sufficient elevation above the system, or static ground level reservoirs with automatic pumping equipment.

A control valve group comprising stop valve, alarm valve, water turbine external gong, differen-

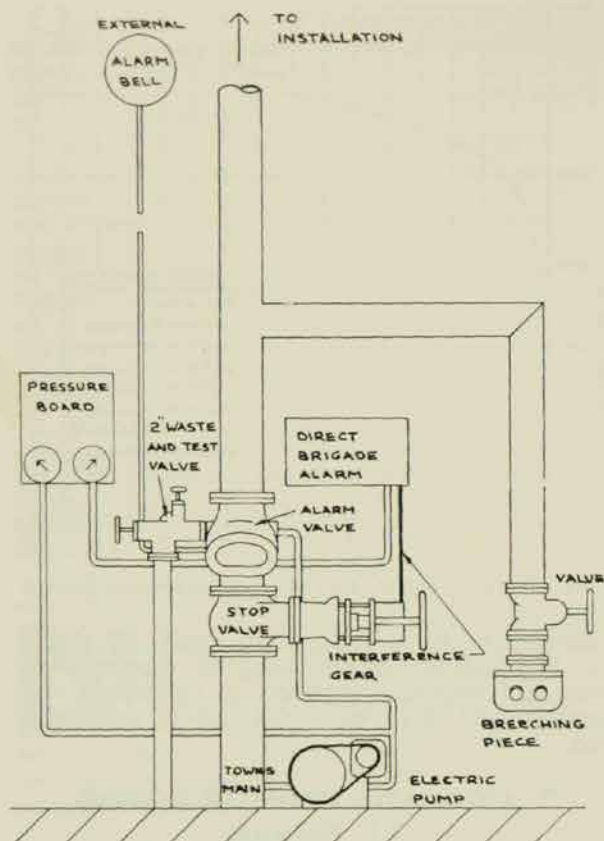


Fig. 2: General arrangement of the control valve group for an automatic sprinkler system.

tial pressure boosting pump, and direct brigade alarm transmitting equipment is generally arranged as in Fig. 2.

The system is normally closed because the pressure above the alarm valve is greater than the maximum pressure in the supply main, but when a sprinkler head opens the drop in system pressure operates the direct brigade transmitter and allows the alarm valve to open for mains supply to flow into the system, and simultaneously operate the external gong. Sprinkler heads now used are a fusible silica bulb type designed for operation at 155°F. Higher temperature ratings are available and some, with very high rating (450°F), are a soldered strut type. The fusing of the bulb releases the seating in the $\frac{1}{2}$ in diameter orifice so that water discharges in a cone, with approximately one-third of the water being thrown up to the ceiling by the deflector.

7.3. Standards of Design

New Zealand practice is to design systems to comply with either the Fire Officers Committee Rules (Foreign), the N.F.P.A. standards, or the New Zealand Fire Underwriters Light Hazard Rules.

Generally all installations are considered for insurance rebate and therefore must comply with the accepted standards of the New Zealand Fire and

Accident Underwriters Association, which are those given in the previous paragraph.

The dead load on the building structure is negligible, for the heaviest 6 in main in a standard system does not exceed 26lb/ft.

Where special high hazard risks are involved the N.F.P.A. rules for extra-ordinary systems should be applied, and these generally decrease the number of sprinklers on one set of valves and increase the water discharge potential by increasing the pipe sizes to the heads.

The transmitting equipment for the brigade alarm, tripped by a pressure drop in the system, is a dual code transmitter used only in New Zealand. The unit transmits an aerial and earth coded signal via N.Z. Post Office lines to the receiving apparatus in the fire station. In rural areas and smaller towns the brigade siren is actuated by closed circuit connection to an electrical pressure switch on the sprinkler installation. All equipment is designed to fail safe, i.e. to operate if the circuit is broken.

Water supplies for effective operation must be of minimum volume at sufficient pressure to maintain a running pressure at the highest sprinkler head of 5 to 15 lb/in².

Ordinary hazard risks with a 6 in sprinkler installation require that the primary supply main provide 350 gal/min with sufficient residual pressure when tested on a screw-down hydrant during normal draw-off periods, and must be able to maintain this flow indefinitely. Additional supplies should be available to the fire brigade so that the sprinkler supply can continue undisturbed.

Light hazard risks with 4 in sprinkler installations require a primary main supply of 300 gal/min minimum at sufficient pressure.

Static storage reservoirs of 100,000 gal or more will be considered for primary supplies if the gravity head is sufficient to provide pressure at the highest sprinkler head or if automatic diesel pumping equipment is installed to supply 625 gal/min to sufficient head.

Secondary supplies can be obtained from street mains in some towns and cities where the storage system includes sufficient independent reservoirs to maintain good supplies at all times. In these circumstances a connection is taken off mains in two streets which are fed independently and can be separated by a valve at some intermediate point.

Elevated storage tanks and pressure tanks, although they are provided for in the rules, are not generally used because earthquake requirements make them uneconomic compared with static ground-level tanks and pumps. Electric pumps with power connection to the line side of domestic switchgear drawing from static tanks provide the most satisfactory secondary supply and gain the maximum rebate of insurance.

Ordinary hazard 6 in systems require 10,000 gal minimum storage with 625 gal/min available from pump, and light hazard 4 in systems require 5,000 gal storage minimum with 250 gal/min available from pump as secondary supplies.

All systems must be supplemented with first aid extinguishing equipment such as a 2 gal water type fire extinguisher placed one unit to each 250 yd², or hose reels at one unit to 500 yd². Dry chemical or carbon dioxide units of equivalent capacity may be substituted in lieu of water type to suit any risks of class B type involved.

Hydrant points, hose reels, or domestic supplies must not be connected to the sprinkler piping or to the connection main from the street main. Water supplies to sprinklers are normally not metered but are subject to annual fixed charges from the supply authority.

7.4. Efficiency

The fire protection engineering industry maintains these standards as a minimum because experience has shown such systems to be very effective; some overseas experience with less than complete protection has been disastrously poor.

In New Zealand and Australia over the last 75 years automatic sprinkler systems have been 99.7% effective with some 3,700 recorded fires; there has been no known loss of life through fire in a building equipped with an automatic sprinkler system.

In the U.S. and Canada, automatic sprinkler systems have been approximately 97% effective in controlling fires within the protected building.

The average fire loss in Australia and New Zealand where fire has occurred in a building with an automatic sprinkler system is only £(N.Z.)280, which is a fraction of the average loss sustained in unprotected buildings.

Factors in New Zealand practice contributing to the better results are: (a) direct brigade alarm transmitting equipment with supervision of stop valves as standard; (b) regular weekly inspection and testing of the system; (c) full building coverage by the system; and (d) the general use of wet systems, which is possible in this country even in winter conditions.

7.5. Economics

An approved system may be classed as plant, and under rulings from the Internal Revenue Department may be depreciated at the plant rate of 10% per annum with a special allowance of 20% extra spread over five years. This provides 52% depreciation of capital investment in five years, with approximately half this representing a tax saving.

Savings on insurance premiums covering fire, loss of profits, etc., are related to the number and quality of the water supplies: with primary supply from single town main or reservoir and pump, 32½%; with primary and secondary supplies from town mains, 45%; and with primary supply from town main or equivalent plus secondary supply from static tank and pump, 50%.

The cost of installation of automatic sprinkler systems in office buildings of modern design is approximately 2% of the total building cost, while in factory buildings costing, say, £3/ft² it is approximately 5%. This is a very economical price for

effective fire protection, irrespective of other depreciation and rebate considerations.

7.6. Objections to Sprinklers

A common misconception is that sprinkler systems cause water damage, but this is quite unrealistic. The systems are not subject to leakage problems with the modern type of head unless mechanical damage occurs, which will only be when someone is present. Further, if a leak occurs the drop in pressure alarm system will call the fire brigade long before any considerable volume of water is discharged.

At normal town mains pressures of, say, 100 lb/in² the discharge is approximately 25 gal per sprinkler head, and some 67% of all fires are extinguished with one head. Much less water is discharged from sprinkler heads than is used by the fire brigade at any later stage of the fire.

Immediately the fire brigade determines that the fire is extinguished, the stop valve is closed and the system is drained.

The water is in a closed system free from fresh air, so that corrosion does not occur to any degree and the water remains relatively clean indefinitely.

The appearance of sprinkler heads in the ceilings of rooms produces most objections, but this can be minimised by various means and such objections are trivial in view of the economics and the effectiveness of the system. Modern office buildings incorporating sprinkler systems can be planned to provide flexible office partition layout without continuous alterations to the position of heads by integration in the design stages.

7.7. Future Developments

American practice is to design pipework layouts so that the discharge rates of heads in an area are equalised. This has become necessary in buildings containing greater fire loads and new storage techniques.

British practice may soon follow this principle of the hydraulic design of systems being related to more specific risk categories, and therefore we may expect this change to come to Australia and New Zealand.

New manufacturing processes will present increasing demands for improvements in automatic sprinkler systems and in other similar systems, which are not common in New Zealand but are available.

8. FIRE DOORS AND FIRE WINDOWS

N.Z.S.S. 1188 is accepted by all authorities as the basis of providing fire doors and fire windows. The Dangerous Goods Regulations also require type C doors. The Fire Underwriters Association considers only type C doors relevant to the requirement of protecting openings through fire walls.

Type C doors are constructed of three or four layers of seasoned redwood timber cross layered, nailed and sheathed with tinplate or galvanised

cladding, suspended on special hardware with fusible links for automatic operation.

Overseas types of fire doors for 2, 3, or 4 hour rating constructed as flush panel construction with suitable insulation are not unknown in New Zealand, but as testing facilities do not exist the introduction of these will not be a simple matter.

However, a revision of N.Z.S.S. 1188 is pending, and new developments may be near.

9. AUTOMATIC ALARM SYSTEMS

9.1. General

An automatic fire alarm system detects a fire in its early stages and transmits an alarm to the fire brigade station over the dual code type transmitter and N.Z. Post Office circuits, and at the same time rings internal and external alarm bells on the building. The system is installed to protect life and property, and it is essential that the system be connected to a fire brigade station or a similar place with adequate fire-fighting facilities because the system is only as effective as the fire-fighting assistance it can summon.

Some automatic alarm systems may be used to operate fixed carbon dioxide flooding systems, or to switch off electric power supplies, air-conditioning equipment, and other sources of fire or items of equipment that may add to the spread of a fire.

The origin of automatic fire alarm systems began to a large extent in New Zealand in approximately 1912, when a N.Z. Post Office engineer designed a detector using the different coefficients of expansion of two elements to make an electrical contact under fire conditions. A number of different detector designs have since been developed, and today in New Zealand the systems accepted for rebate purposes by the N.Z. Fire and Accident Underwriters Association use detectors which fall into two main categories: (a) the fusible fixed temperature type, and (b) the smoke detection type.

A third system employing the thermopile principle of electrically balanced circuits is accepted by Government departments only.

9.2. Fusible Fixed Temperature Systems

9.2.1. Electrical

Each fire detector is connected to a circuit, wired on both the open and closed principle, with a robust switch set in a plastic body held in the closed circuit position by fusible alloy solder within a metal heat collector. In this normal position a constant voltage of 12 or 24 V d.c. passes through each circuit and through the closed circuit coil of the alarm, which controls a shutter mechanism in the master transmitting panel. Any interruption of the current in the circuit either by the fusing of the detector or by damage to the circuit wiring will open the circuit and thereby release the mechanical shutter or relay under gravity; this immediately operates the alarm transmitter to the fire station, the circuit indication and alarm bells, and any other connected services. The open circuit

to each fire detector is completely independent, so that there is a second means of operation of the transmitter and alarm shutter should there be a short-circuit in the cables, and has connected to it a more powerful coil which will release the shutter actuating mechanism whether or not the closed circuit coil has been de-energised. The indicator panel containing the transmitting equipment is built to contain any number of circuits and provide any form of indication required as to the locality of the alarm within the building.

9.2.2. Pneumatic

The system incorporates circuits of copper tubing, of $\frac{1}{4}$ in internal diameter, which are run in circuits throughout the building and into which a fire detector comprising a coil of tubing with fusible solder alloy is inserted at required positions. The melting of the fusible alloy will release the air pressure in the circuit, normally at 25 lb/in², and thereby operate a shutter mechanism in the alarm cabinet. Associated with the pipework circuit is an air pressure storage tank fitted with orifice outlets to the pipework circuits; these replenish the slight losses, but are not large enough to prevent loss of pressure when the fusible alloy melts from the detector loop.

9.3. Thermopile System

This system incorporates fire detectors which, when heated, generate an electric current that will unbalance the circuit sufficiently to register a fire indication on a galvanometer. This action is an open-circuit electrical contact, and on operation a relay circuit to the transmitter and alarm bell etc. operates a coil releasing the mechanism. A supervisory current of approximately 20 milliamps is applied over the balanced circuit, and if this circuit is broken the galvanometer will give a fault indication. The detectors also incorporate fusible links which on operation will break the supervisory circuit and therefore register a fire condition.

9.4. Smoke Detection System

This system incorporates an ionisation chamber in which a small radioactive element is used to create a minute electrical current within a balanced circuit. The products of combustion affect the ionised air in the chamber so as to alter the amount of current that can pass and thus unbalance the circuit. This current change can be multiplied up by a suitable cold-cathode tube incorporated in the detector head to trigger a normal 24 V system of indicator shutters, relays, etc. to transmit the call to the brigade. This particular system has the advantage of detecting products of combustion or smoke at a very early stage in the fire before much heat is released, and is therefore most suitable for operating smoke-stop doors on escalators, closing down of air-conditioning equipment, overheating in electrical and electronic equipment, and for use in positions where smoke damage can present hazards to life or to goods in storage. This system is most

satisfactory for the automatic operation of fixed carbon dioxide flooding systems (see section 10 below). In these installations it is normal to have the electric trip to such systems operated only after two independent detector circuits have been triggered; the first circuit operates an alarm to alert any workers in the building who may have caused smoke accidentally.

The system has proved most satisfactory in regard to stability against accidental discharge from cigarette smoking and atmospheric temperature changes, but is not recommended for applications where heavy dust conditions are experienced.

9.5. Economics

An automatic alarm system will cost approximately a quarter to a third as much as an automatic sprinkler system, and will earn a rebate of 17½% on insurance premiums, providing that it is connected to an approved fire brigade station and first aid extinguishers are installed. Depreciation may be claimed for this system on the basis of 10% per annum as plant.

10. CARBON DIOXIDE EXTINGUISHING SYSTEMS

Carbon dioxide, because it is heavier than air, will smother a fire as long as there is sufficient carbon dioxide within the fire area. Because it is a gas which does not cause trouble to electrical equipment, flammable liquids, etc., it is ideal for total flooding of either the piece of equipment involved or the room in which the equipment is located. Carbon dioxide is normally stored in high-pressure steel cylinders fitted with either mechanical or electrical release valves that can be tripped by a detector system, such as the smoke detector mentioned in section 9 above, or by mechanical means on the failure of fusible links.

These systems have been applied in New Zealand to special hazards such as computers, flammable liquid storage or dip tanks, printing presses, metal rolling mills, and other electrical switchgear. Similar equipment has been built in to protect hydro-electric generator equipment, on board ships for hold protection, and in aircraft.

11. OTHER EXTINGUISHING SYSTEMS

Foam systems have not been widely used in New Zealand as fixed installations, but mobile equipment for the generation of foam is carried by most fire brigades and oil companies and is installed on airfield crash tenders.

Dry chemical extinguishing systems are new developments which offer many potential advantages, but they have not yet been applied as fixed installations in this country.

12. ACKNOWLEDGEMENT

The author gratefully acknowledges the permission received from the directors of Wormald Brothers Industries (N.Z.) Ltd. to quote from company records and references.

13. SHORT BIBLIOGRAPHY

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APPENDIX

Water Requirements for Fire-fighting Purposes

An extract issued by the Auckland Metropolitan Fire Board in reference to Fire Service Council Code of Practice 1965/30 *Piped Water Supplies and Fire Hydrants*:

Class 1: 2,500 gal/min. Inner city area. Areas of wool stores and cargo stores, oil installations, harbour installations. Sub-urban heavy industrial areas, freezing works, timber yards, and factories. Fertiliser works, etc., larger hospitals of higher risk construction.

Class 2: 1,250 gal/min. Areas mainly commercial and light industrial outside the inner area and in suburban areas, isolated industries, large schools, halls, etc. Shopping centres, etc., areas of large apartment houses closely built.

Class 3: 600 gal/min. Older residential areas where buildings are of mainly wooden construction and closely built. Areas of mainly very large wooden apartments and homes.

Class 4: 300 gal/min. Mainly the newer residential areas. The initial flow from one hydrant should not be less than 200 gal/min for residential areas and not less than 400 gal/min for commercial and industrial areas. These quantities would be required to be available even during peak summer draw-off conditions.

Suitable static water supplies are accepted providing in each case there is sufficient quantity available for the fire risks involved, the access is suitable for brigade pumps, and the supply is available at all times throughout the year. Static water supplies include swimming baths, creeks, waterfront areas, ponds, and special reserve static supplies.

It is desirable to be able to bear upon one single point all water supplies within a radius of 300 yd, to give the quantities required in classes 1, 2, 3, and 4.

Hydrants

Screwdown hydrants generally give an increase in flow of approximately 60% compared with ball hydrants. Screwdown hydrants may be installed at 150 yd intervals in residential areas and at 100 yd intervals in industrial, commercial, and other high risk areas. Screwdown hydrants should be marked yellow and ball hydrants white.

It would be desirable in a long term policy if hydrant markers included the size of the main on which the hydrants are installed.

Hydrants on trunk or feed mains could be marked with a circle around the hydrant box (yellow or white depending whether screwdown or ball hydrants).

A screwdown hydrant is required to turn on in an anti-clockwise direction.

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Jenny Maxwell

Safety First NZ Ltd

PO Box 1830, Auckland

Level 1, 2, 3, 4

Les Mellars

Active Fire Consultants

3A Arran Rd, Browns Bay

Level 1, 2, 3, 4

Chris Mellars

Active Fire Consultants

3A Arran Rd, Browns Bay

Level 1, 2, 3, 4

Diane Thomson

Red Alert NZ 2012 Ltd

PO Box 4515 Shortland St, Auckland

Level 1, 2, 3

Sandra Thomson

Red Alert NZ 2012 Ltd

PO Box 4515 Shortland St

Auckland

Level 1, 2, 3, 4

Lian Khoo

Property Brokers Compliance Ltd

P O Box 5004

Palmerston North 4441

Levels: 1, 2, 3, 4

John Llewellyn

Safety Fire New Zealand Limited

PO Box 1830, Auckland 1140

Level 1, 2, 3, 4

Ian McKenzie

CoveKinloch Building Compliance Ltd

PO Box 2571

Shortland Street, Auckland 1140

Level 1, 2, 3, 4

FPANZ Certified Fire Alarm Contractors as at February 2015

Aquaheat New Zealand Ltd

PO Box 51031, Tawa

Argus Fire Protection

PO Box 13508

Onehunga, Auckland

Armitage Group

PO Box 300 483

North Harbour, Auckland

Ask Metro Fire Limited

PO Box 84103, Westgate

Waitakere, Auckland

Chubb Fire & Services

PO Box 19616, Christchurch

All Branches

Compliance Fire Alarms

PO Box 18817, Christchurch

Cowley Services Ltd

PO Box 13782, Auckland

Tech Group of Companies

PO Box 3016, Napier

FFP Nelson Marlborough Fire Ltd

PO Box 2365, Stoke, Nelson

Fire System Maintenance

PO Box 29074,

Greenwoods Cnr, Auckland

Fire Fighting Pacific Canterbury

PO Box 22189, Christchurch

Fire Security Services

Private Bag 3207, Hamilton

All Branches

First Fire Systems

PO Box 112120, Penrose, Auckland

Guardian Alarms

73 Rugby Street, Mt Cook, Wellington

Auckland, Wellington & Christchurch branches

Select Alarms

PO Box 544, Hamilton

Triangle Fire Protection

PO Box 34 449

Birkenhead, Auckland

Property Brokers Compliance Ltd

PO Box 5004, Palmerston North

Fire Control Services Limited

PO Box 87-122

Meadowbank, Auckland 1742

LISTINGS

PLEASE NOTE Aon will be writing to contractors regarding 2015 renewals which are due shortly

Listed Sprinkler Contractors Provided by Aon

| CONTRACTOR NAME | LISTING TYPE |
|--|--------------|
| Affordable Fire Protection | Provisional |
| ASF Total Fire Protection (Including Life Safety Service (2010) Ltd) | Full |
| Almak | Full |
| Aon Inspections Service | Full |
| Aquaheat Industries Ltd | Full |
| Argus Fire Systems Service Limited | Full |
| Armitage Group Limited | Full |
| Ask Metro Fire | Full |
| B&M Sprinkler Ltd | Full |
| Black and White Fire Systems (2011) Ltd | Provisional |
| BSC Fire Ltd | Full |
| Central Fire Design Limited | Full |
| Chubb Systems & Services Ltd Chubb NZ Ltd | Full |
| Compliance Fire Protection Ltd | Full |
| Cowley Services | Full |
| Dynamic Fire Protection | Full |
| Electrotech Controls Ltd | Full |
| Emergency Management Solutions | Full |
| Emerson Fire Protection Ltd | Provisional |
| Elite Fire Protection Ltd | Provisional |
| Fire Control Services Limited | Full |
| Fire & Mechanical Contracting Ltd | Full |
| Fire Fighting Pacific Canterbury Limited | Full |
| Fire First Systems Limited | Full |
| Fire Protection Engineers Limited | Full |
| Fire Protection Inspection Service Ltd | Full |
| Fire Risk Management Ltd | Provisional |
| Fire Security Service Ltd | Full |
| Fire Solutions Limited | Full |
| Fire Sprinkler Installations NZ Ltd | Full |
| Fire System Inspections Ltd | Full |
| Fire System Maintenance Ltd | Full |
| Fire Systems Consultants | Provisional |
| FFP Nelson Marlborough Fire Ltd | Full |
| Homesafe Ltd | Full |
| Hudson Inspections | Full |
| Kensway Fire Limited | Full |
| LA Inspection Services Ltd | Provisional |
| Maximus Fire Limited | Provisional |
| Nationwide Fire Protection Ltd | Full |
| Nelson Marlborough Fire Services Ltd | Full |
| Oceania Fire Protection | Full |
| Pacific Building Services | Full |
| Property Brokers | Full |
| Rapid Fire Protection Ltd | Provisional |
| Spotless Facility Service (NZ) Limited | Full |
| Triangle Fire Protection Ltd | Full |
| Southgate Fire & Safety Limited | Full |
| South Pacific Fire Protection Ltd | Full |
| Sprinkler Fitout Specialist Limited | Full |
| Ultra Fire Sprinkler Systems Ltd | Full |
| Unifire Ltd | Full |
| Wormald (Tyco New Zealand) Ltd | Full |

LISTINGS

FPANZ Fire Extinguisher Service Agents as of February 2015

| COMPANY NAME | PHONE | EMAIL/WEBSITE | LOCATION/S |
|--|--------------------------------|--|--|
| Argus Fire Systems Service Ltd | 0800 427 487 | service@argusfire.co.nz www.argus.co.nz | Whangarei, Auckland Hamilton, Rotorua Wellington, Christchurch |
| Armitage Group | 09 476 0936 | www.armitagegrp.com | Auckland |
| Chubb Fire & Security Ltd | 0800 800 535 | www.chubb.co.nz | National through central contact |
| Compliance Fire Protection Ltd | (03) 382 1155 | glenda@cfpl.co.nz www.compliancefire.co.nz | Christchurch |
| Eastland Fire Compliance & Locking Ltd | (06) 868 3333 | geoff@efcl.co.nz www.efcl.co.nz | Gisborne & East Cape |
| Fire & Building Compliance Ltd | 0800 488 758 | info@fbc.co.nz www.fbc.co.nz | Auckland, Waikato, Tauranga, Turangi |
| Fire Control Services Ltd | 0800 352 637 | info@firecontrol.co.nz www.firecontrolsolutions.co.nz | National |
| Fire Fighting Pacific Canterbury Ltd | (03) 366 7889 (03) 688 9070 | linda@ffp.co.nz timaru@ffp.co.nz www.ffp.co.nz | Christchurch Timaru Canterbury |
| Fire International (NZ) Ltd | 09 524 8847 | fireintern@clear.net.nz www.fireinternational.co.nz | Auckland |
| Fire Security Services Ltd | 0800 114 611 | robinm@firesecurity.co.nz www.firesecurity.co.nz | North Island |
| Firewatch (NZ) Ltd | 0800 347 392 | sales.support@firewatch.co.nz www.firewatch.co.nz | National through Agents |
| Mainland Extinguishers | (03) 544 9645 | mainx@extra.co.nz | Richmond, Nelson |
| National Fire Protection (2006) Ltd | (09) 473 6102 | nat-fire@extra.co.nz www.nationalfire.co.nz | Auckland, Rodney |
| Property Brokers Compliance Ltd | 0800 226 675 | compliance@propertybrokers.co.nz www.propertybrokers.co.nz | Lower North Island |
| Southern Fire Protection Ltd | (03) 476 7873 | southernfire@extra.co.nz southernfire.co.nz | Dunedin |
| Spot on Fire Protection Ltd | 0800 444 700 | spotonfireprotection@extra.co.nz www.spotonfireprotection.co.nz | Bay of Plenty |
| Westland Fire Equipment (2006) Ltd | (03) 762 5609 | wfe2006@extra.co.nz | South Island West Coast -South Karama to Haast |
| Wormald (NZ) Ltd | 0800 4967 6253 | Wormald.questions.nz@tycoint.com www.wormald.co.nz | National |

FIRE SAVES

FPANZ Recorded Fire Saves for January 2015

| | | | | |
|------------|--------------------|--|---|---|
| 3/01/2015 | Automatic PFA Call | Utilities, Disposal KINLEITH, SOUTH WAIKATO DISTRICT | Miscellaneous Fire | Careless disposal or use: cigarettes, cigars, ashes, embers |
| 4/01/2015 | Manual PFA Call | Residential EPSOM, AUCKLAND | Structure Fire | Unattended cooking |
| 4/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage FITZROY, HAMILTON CITY | Structure Fire | Automatic control failure |
| 4/01/2015 | Other PFA Call | Residential TITIRANGI, AUCKLAND | Vegetation Fire | Controlled burn, land clearing fire |
| 5/01/2015 | Manual PFA Call | Educational CHRISTCHURCH CENTRAL, CHRISTCHURCH CITY | Structure Fire | Mechanical failure, malfunction - not classified above |
| 5/01/2015 | Automatic PFA Call | Educational BLENHEIM, MARLBOROUGH DISTRICT | Structure Fire | Suspicious |
| 7/01/2015 | Manual PFA Call | Commercial, Retail, Manufacturing, Storage KAWERAU, KAWERAU DISTRICT | Structure Fire | Part failure, leak or break |
| 7/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage UNDERWOOD, INVERCARGILL CITY | Flammable Liquid, Gas Incident | Information not recorded |
| 7/01/2015 | Manual PFA Call | Commercial, Retail, Manufacturing, Storage WAIRAU VALLEY, AUCKLAND | Structure Fire | Heat source too close to combustibles |
| 8/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage KINLEITH, SOUTH WAIKATO DISTRICT | Structure Fire | Carelessness with material ignited - not classified above |
| 8/01/2015 | Manual PFA Call | Residential WAIROA, WAIROA DISTRICT | Structure Fire | Unattended cooking |
| 8/01/2015 | Other PFA Call | Commercial, Retail, Manufacturing, Storage KAITIA, FAR NORTH DISTRICT | Electrical Hazards | Information not recorded |
| 8/01/2015 | Manual PFA Call | Educational GRAFTON, AUCKLAND | Structure Fire | Other electrical failure |
| 8/01/2015 | Other PFA Call | Commercial, Retail, Manufacturing, Storage UNDERWOOD, INVERCARGILL CITY | Flammable Liquid, Gas Incident | Information not recorded |
| 9/01/2015 | Sprinkler PFA Call | Commercial, Retail, Manufacturing, Storage MATAURA, GORE DISTRICT | Structure Fire | Automatic control failure |
| 10/01/2015 | Automatic PFA Call | Residential AUCKLAND CENTRAL, AUCKLAND | Structure Fire | Unlawful |
| 10/01/2015 | Sprinkler PFA Call | Commercial, Retail, Manufacturing, Storage MATAURA, GORE DISTRICT | Structure Fire | Automatic control failure |
| 12/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage WAINGAWA, CARTERTON DISTRICT | Structure Fire | Part failure, leak or break |
| 12/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage TAURANGA, TAURANGA CITY | Structure Fire | Short circuit, earth fault |
| 12/01/2015 | Automatic PFA Call | Residential QUEENSTOWN, QUEENSTOWN-LAKES DISTRICT | Structure Fire | Carelessness with heat source - not classified above |
| 13/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage DURIE HILL, WANGANUI DISTRICT | Structure Fire | Equipment not being operated properly |
| 13/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage KINLEITH, SOUTH WAIKATO DISTRICT | Structure Fire | Failure to clean |
| 14/01/2015 | Manual PFA Call | Commercial, Retail, Manufacturing, Storage KAWERAU, KAWERAU DISTRICT | Mobile Property Fire | Part failure, leak or break |
| 14/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage KINLEITH, SOUTH WAIKATO DISTRICT | Chemical, Biohazard, Radioactive Incident | Information not recorded |
| 14/01/2015 | Automatic PFA Call | Not Recorded PETONE, LOWER HUTT CITY | Not Recorded | Information not recorded |
| 15/01/2015 | Manual PFA Call | Commercial, Retail, Manufacturing, Storage KARORI, WELLINGTON CITY | Structure Fire | Unlawful |
| 16/01/2015 | Manual PFA Call | Residential MANGERE, AUCKLAND | Structure Fire | Part failure, leak or break |
| 16/01/2015 | Manual PFA Call | Not Recorded AUCKLAND CENTRAL, AUCKLAND | Structure Fire | Information not recorded |
| 17/01/2015 | Other PFA Call | Recreational, Assembly OTAUTAU, SOUTHLAND DISTRICT | Vegetation Fire | Lawful |
| 17/01/2015 | Automatic PFA Call | Residential AUCKLAND CENTRAL, AUCKLAND | Structure Fire | Unattended cooking |
| 17/01/2015 | Manual PFA Call | Educational TE ARO, WELLINGTON CITY | Structure Fire | Other electrical failure |
| 19/01/2015 | Manual PFA Call | Not Recorded MIDDLEMORE HOSPITAL, AUCKLAND | Not Recorded | Information not recorded |
| 19/01/2015 | Automatic PFA Call | Recreational, Assembly NORTH DUNEDIN, DUNEDIN CITY | Structure Fire | Failure to clean |
| 19/01/2015 | Automatic PFA Call | Residential DUNEDIN CENTRAL, DUNEDIN CITY | Structure Fire | Operating deficiency - not classified above |
| 19/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage KINLEITH, SOUTH WAIKATO DISTRICT | Miscellaneous Fire | Friction (sparks etc.) |

FIRE SAVES

FPANZ Recorded Fire Saves for January 2015

| | | | | |
|------------|--------------------|--|--|--|
| 20/01/2015 | Sprinkler PFA Call | Commercial, Retail, Manufacturing, Storage ROSLYN, PALMERSTON NORTH CITY | Electrical Hazards | Information not recorded |
| 20/01/2015 | Automatic PFA Call | Utilities, Disposal HAYWARDS, LOWER HUTT CITY | Electrical Hazards | Information not recorded |
| 20/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage KINLEITH, SOUTH WAIKATO DISTRICT | Chemical, Biohazard, Radioactive Incident | Information not recorded |
| 21/01/2015 | Manual PFA Call | Commercial, Retail, Manufacturing, Storage OTAHUHU, AUCKLAND | Structure Fire | Combustible placed too close to heat source |
| 21/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage KINLEITH, SOUTH WAIKATO DISTRICT | Flammable Liquid, Gas Incident | Information not recorded |
| 21/01/2015 | Other PFA Call | Not Recorded DUNSANDEL, SELWYN DISTRICT | Vegetation Fire | Information not recorded |
| 22/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage PETONE, LOWER HUTT CITY | Structure Fire | Part failure, leak or break |
| 22/01/2015 | Manual PFA Call | Commercial, Retail, Manufacturing, Storage PIPI TEA, WELLINGTON CITY | Structure Fire | Part failure, leak or break |
| 22/01/2015 | Manual PFA Call | Commercial, Retail, Manufacturing, Storage OWHATA, ROTORUA DISTRICT | Structure Fire | Operating deficiency - not classified above |
| 22/01/2015 | Manual PFA Call | Health, Institutional BROCKVILLE, DUNEDIN CITY | Structure Fire | Unattended cooking |
| 22/01/2015 | Automatic PFA Call | Educational HUTT CENTRAL, LOWER HUTT CITY | Structure Fire | Failure to clean |
| 23/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage KINLEITH, SOUTH WAIKATO DISTRICT | Flammable Liquid, Gas Incident | Information not recorded |
| 23/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage KINLEITH, SOUTH WAIKATO DISTRICT | Flammable Liquid, Gas Incident | Information not recorded |
| 23/01/2015 | Manual PFA Call | Not Recorded STOKE, NELSON CITY | Not Recorded | Information not recorded |
| 23/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage MOEREWA, FAR NORTH DISTRICT | Structure Fire | Spontaneous ignition |
| 24/01/2015 | Automatic PFA Call | Not Recorded INVERCARGILL, INVERCARGILL CITY | Not Recorded | Information not recorded |
| 26/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage AUCKLAND CENTRAL, AUCKLAND | Electrical Hazards | Information not recorded |
| 26/01/2015 | Manual PFA Call | Commercial, Retail, Manufacturing, Storage PIPI TEA, WELLINGTON CITY | Structure Fire | Carelessness with heat source - not classified above |
| 27/01/2015 | Manual PFA Call | Other WAIOURU MILITARY CAMP, RUAPEHU DISTRICT | Miscellaneous Fire | Combustible placed too close to heat source |
| 28/01/2015 | Sprinkler PFA Call | Not Recorded THREE KINGS, AUCKLAND | Structure Fire | Information not recorded |
| 28/01/2015 | Automatic PFA Call | Commercial, Retail, Manufacturing, Storage GREY LYNN, AUCKLAND | Structure Fire | Operating deficiency - not classified above |
| 28/01/2015 | Manual PFA Call | Commercial, Retail, Manufacturing, Storage THREE KINGS, AUCKLAND | Structure Fire | Lack of maintenance |
| 28/01/2015 | Other PFA Call | Residential ONEHUNGA, AUCKLAND | Miscellaneous Fire | Unlawful |
| 29/01/2015 | Manual PFA Call | Not Recorded PENROSE, AUCKLAND | Not Recorded | Information not recorded |
| 29/01/2015 | Manual PFA Call | Not Recorded LINTON CAMP, PALMERSTON NORTH CITY | Not Recorded | Information not recorded |
| 29/01/2015 | Manual PFA Call | Not Recorded GLENBROOK, AUCKLAND | Vegetation Fire | Information not recorded |
| 29/01/2015 | Sprinkler PFA Call | Not Recorded WELLINGTON CENTRAL, WELLINGTON CITY | Not Recorded | Information not recorded |
| 29/01/2015 | Manual PFA Call | Commercial, Retail, Manufacturing, Storage TAKAPUNA, AUCKLAND | Structure Fire | Unattended cooking |
| 29/01/2015 | Manual PFA Call | Residential AUCKLAND CENTRAL, AUCKLAND | Structure Fire | Unattended cooking |
| 29/01/2015 | Automatic PFA Call | Transportation KINLEITH, SOUTH WAIKATO DISTRICT | Vegetation Fire | Careless disposal or use: cigarettes, cigars, ashes, embers |
| 30/01/2015 | Automatic PFA Call | Not Recorded MARTON, RANGITIKEI DISTRICT | Miscellaneous Fire | Information not recorded |
| 30/01/2015 | Automatic PFA Call | Not Recorded SOCKBURN, CHRISTCHURCH CITY | Chemical, Flammable Liquid or Gas Fire | Information not recorded |
| 30/01/2015 | Sprinkler PFA Call | Residential SPREYDON, CHRISTCHURCH CITY | Structure Fire | Unlawful |
| 30/01/2015 | Automatic PFA Call | Not Recorded HORNBY, CHRISTCHURCH CITY | Not Recorded | Information not recorded |
| 31/01/2015 | Automatic PFA Call | Recreational, Assembly NEW PLYMOUTH, NEW PLYMOUTH DISTRICT | Structure Fire | Unlawful |

48TH ANNUAL CONFERENCE & EXPO

19 -22 APRIL
2015

AUCKLAND
SKYCITY CONVENTION
CENTRE

Building Officials Institute of NZ Annual Conference & Expo 2015

19-22 April 2015, SkyCity Convention Centre, Auckland

The Building Officials Institute of New Zealand's Annual Conference and Expo is a must attend event for anyone interested in Building Controls.

Who Should Attend?

Building Control Professionals

Regulatory Authorities

Building Surveyors

Government Representatives

Architects and Engineers

Builders and Developers

Anyone interested in the Regulatory Sector

As well as offering a comprehensive Technical Programme with Key Sessions including Consenting, Inspection, Fire Regulation, and Plumbing and Drainage, this event also offers a complete social programme and expo, providing attendees with the perfect environment to expand your knowledge while delivering valuable networking opportunities that will help shape your professional development.

Registrations for BOINZ Annual Conference & Expo are open NOW!

Early Registrations close 1 March 2015

For more Information

Please visit our website www.boinz.org.nz

Or email events@boinz.org.nz



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