Volume 27 - Issue 2

BOA
Building Operators Association of Canada

Official Publication of the Building Operators Association (Calgary)

OCTOBER 2020

BOA TRADESHOW POSTPONED UNTIL MAY 2021

What's Inside?

Important Phone Numbers

Emergency	911
Alberta Boiler Association	403 291 7070
Alberta Labour (Emergency)	403 297 2222
Buried Utility Locations	1 800 242 3447
City Of Calgary (All Departments)	311
Dangerous Goods Incidents	1 800 272 9600
Environmental Emergency	1 800 222 6514
Poison Centre	403 670 1414
Weather Information (24hr)	403 299 7878

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President's Message

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Building Operators Association
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I hope this message finds you and yours well and in good health

There is a lot of mixed messages out there as pertains to how we should be operating our facilities under the Covid Virus. The Building Operators Association will do our best to disseminate the messages and provide links to the ones we believe are true. We will keep those links on our website for you to read. We will focus our Webinar guest speakers on operations that will minimize risks to your customers and tenants. We must be aware of people that try to scare us with tactics that would have us believe their product is the only one that will do the job. There are a lot of unfaithful people out there that will take advantage of the uninformed. We have a group, a subcommittee that you as a member, can ask questions of and we will try to help you in making your decisions. We have it named technical@boacalgary.com I hope our committee head, Kyle D'Agostino or any other member can assist. Please remember we don't know everything but all of us together make one hell of a good Operator.

The Law still will not let us gather with a table meeting so we will continue to have webinars in place of. We will wait until the new year to see if the government will allow us our trade show. If you have any suggestions of topics you would like to hear of please, drop us a line. I'm thinking of UV lighting.

I wonder what a virtual trade show would look like, anybody ever hear of one??

Our first attempt at presenting at a Webinar was not very good but the second attempt on the following Thursday was much better. We are new at it and we can only get better. I want to thank Dennis from Honeywell and Shawn from Excel for their patience. Our next presentation will be filtration and how people are filtering their air under these trying times, living and working in a safe manner. The presenters will be from BGE indoor air quality solutions. Some people are upgrading their filters some are not, and some don't know if they should or not. There are some rumors that increasing the efficiencies will alter the performance of air delivery. Those and other questions can and will be answered at the webinar October 13th at 5PM, mountain time. I hope to see you there friends.

Les Anderson PE, RPA

JOIN US!

For our Virtual BOA Monthly Meeting on

Tuesday October 13, 2020 at 5pm

zoom

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TEST YOUR OPERATOR IQ!

Are you equally adept at troubleshooting problems in the boardroom and the boiler room? As the resident facility guru, there's a lot riding on whether or not you know the difference between sounds control and a sound investment.

Try our monthly Operator IQ challenge...answers on page 15

1. A safety relief valve is like a safety valve except it:

a. does not have a blowdown ring or bottom guides

b. must have greater blowdown

c. may have an isolation valve placed between it and the pressure vessel

d. must discharge directly to the atmosphere

e. is prone to leakage

2. A stop valve is allowed between the safety valve and the boiler drum when:

a. the stop valve is locked open

b. there is more than one safety valve

c. a rupture disc is placed between the stop valve and the safety valve

d. no stop valves are allowed before or after the safety valve

e. the stop valve is the quick opening type

3. A try lever safety valve test will:

a. ensure the popping pressure is correct

b. indicate that valve capacity is adequate

c. ensure the closing pressure is correct

d. take approximately 2 seconds

e. ensure the valve is free to operate

4. An agency or code with which fittings must comply with is the:

a. Health and Safety code

b. Fittings and Boiler Parts Act

c. Boiler Repair code

d. Plumbing Gas Act

e. ASME Code

5. An operator should check that a boiler safety valve will open at its set pressure by:

a. sending for the inspector to bring his or her test gauge

b. increasing the boiler pressure until the valve opens and noting the pressure on the pressure gauge when the valve opened

c. putting a piece of pipe over the lifting lever and lifting the valve off its seat when the seat pressure is reached

d. connecting the boiler to an air compressor during shut down and raising the pressure in the boiler until the set pressure is reached

e. listening to the alarms of the set pressures

WAGING WAR ON PESTS
Devising a strategy that combines knowledge, technology and chemistry can defeat even the toughest invaders

by Terry E. Walton

Pest management means considerably more than simply using pesticides and other weapons to kill insects and other small invaders. These kinds of efforts are only one part of a more comprehensive program tocontrol the facility environment and prevent pest problems from developing and infliing damage.

In most organizations, pest control is the responsibility of the maintenance department. In fact, various federal, state and local laws mandate that specified organizations maintain their own pest-control programs.

Facilities' pest-control efforts can be successful by focusing on a number of common small animals and birds that present the most persistent threat. These efforts include some combination of proven tactics to reduce the damage that pests can do to both buildings and landscapes.

When dealing with animal pests, perhaps a maintenance manager's best weapons are knowledge of pests' habits and movements, as well as a fair amount of persistence, patience and a good sense of humor. Unfortunately, in some cases, facilities simply may have to learn to live with the presence of pests and the problems they cause if the situation simply cannot be brought under control.

Mice and Rats

Controlling rodents is an ongoing effort. Managers and crews must have a successful strategy that includes being familiar with all physical aspects of the property. Managers must pay special attention to areas that can cause problems outside a building. These include but are not limited to:

- standing water
- creeks and streams
- dirty waste containers
- sewer drainage systems
- neighboring businesses
- excessive shrubbery.

Mice feed on stored food products and all kinds of seeds, including bird and lawn seed. Mice love dark areas, such as closets, garages, attics, crawl spaces, and any other areas were they can stay concealed and close to their food supply.

Once mice are inside of a building, workers can track them by locating their droppings where they are foraging for food. But beware: Large roach droppings can look the same as mice droppings, so workers should be careful not to confuse the two.

The key strategy in this instance is to remove anything that could serve as a home for mice around the outside of a facility. Grounds crews should keep weeds down and grass mowed closely -under shrubs and trees. Also, they should avoid storing mulch piles in the fall because warm mulch is a perfect place for mice to spend the winter.

Rats will move into any structure. They are excellent climbers and can enter property by climbing up stucco, brick or wood siding walls.

Rats can enter a building through even the smallest point of entry, one that often is difficult to locate. Workers should pay particular attention to areas such as vent pipes, gable vents, spaces around soffits, the spaces between fascia boards, and any exhaust-pipe holes.

If rats cannot find an available opening, they often will chew their way into a building. They can be located by tracking their droppings, which often are about the size of a red or black bean.

Rodent-control methods usually consist of live traps, snap-shut traps, poisons and glue boards. Rodenticides are a common ingredient of rodent-control efforts, but one problem can occur with this type of product. The rodent can die within a wall or an inaccessible void, causing odors and a new set of challenges. Trapping often is an effective method of getting rid of these rodents.

Birds

Problem birds - pigeons, sparrows, geese, swallows, crows, ducks, woodpeckers, starlings, and blackbirds - can cause a host of problems for maintenance managers. Birds, especially pigeons, love to roost and nest in and around rooftop equipment, and foraging birds can dam- age buildings, equipment, landscapes and plants.

Many facilities use devices such as strips of metal spikes around rooftop equipment, building ledges, windowsills, and gutters. These devices are designed to make it impossible for any birds to land and nest on the surface. Scented repellants also are commonly used to

keep birds away from the outside surfaces of facilities. These products emit scents that cause mild changes in the physiological state of the bird, confusing the bird and causing it to avoid the area.

Often, chemicals with these scents come in easy-to-use cartridges that fit into caulk guns, which workers use to apply the gel to areas where birds land and roost.

Another type of bird repellent comes in liquid form and works well when applied to trees or anyplace birds routinely roost and nest. Workers should be aware of one caution with using these types of products - they will soak into porous materials and discolor them.

Finally, facilities have used several sound devices successfully over the years. One popular type of device emits a shrill sound that scares away birds, while another type of device uses ultrasound. This device makes no noise that is audible to people, but the series of sounds it emits distresses birds and keeps them away.

Ants

Facilities must deal with many types of ants, including small honey ants, citronella ants, carpenter ants, acrobat ants, thief ants, fire ants, house ants, odorous house ants and pharaoh ants. Each ant species requires a different strategy for control. Some ants live outside of a facility, while others more often can be found inside.

A three-step approach can help control most ant problems. This approach includes baiting key areas inside of a facility, along with spraying and baiting the outside of the facility.

No doubt the surest method of control is the bait that ants carry back to the nest. Ants find this bait and bring it back to their nests and colonies, where other members eat the bait and die. The advantage of this method over spraying is that it destroys colonies and nests. Spraying, on the other hand, usually takes care only of the ants receiving the spray and leaves those back at the colonies untouched.

Cockroaches

A new trend for controlling cockroaches is the implementation of a multi-discipline strategy that can include vacuuming, baiting and trappings. In the past, most commercial and institutional facilities have used insecticides, but this method offers limited benefits. Vacuuming for cockroaches has become the method of choice by many pest management professionals in recent years, as not even resistant cockroaches can withstand direct physical removal through vacuuming.

Flies

When it becomes necessary to get serious about fly control, managers and crews should begin their efforts by seeking out the source of the problem. Interior areas and conditions to monitor include food preparation areas, dirty trash receptacles, areas where mops and dirty rags are left on the ground, and waste containers located inside a receiving area.

Exterior areas and conditions to monitor include large waste containers, drains, excessive clutter, spills on floors and pallets, areas of high weed growth and decaying organic vegetation.

When surveying a facility, managers should determine whether existing conditions are conducive to the presence of flies. Spraying, using flypaper strips and removing or cleaning the source that draws the flies is often the best method of combat.

The challenge in pest control is to determine the best method or combination of methods that produce the best results. The successful managers will be those who can orchestrate the methods, schedules and people to meet a facilities' pest control needs - and do it safely and cost-effectively.

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KenKen Puzzle

How to solve the Kenken puzzle:

(Answers on page 15)

- Fill in the numbers from 1 –6
- Do not repeat the number in any row or column
- The numbers in each heavily outlined set of squares, called cages, must combine (in any order) to produce the target number in the top corner using the mathematical operation indicated
- Cages with just one square should be filled in with the target number in the top corner
- A number can be repeated within a cage as long as it in the same or column

2–		3+		2–	
2÷		108×	1–	3÷	3+
30×					
			1–		1–
24×	8×		1–		
		4–		3–	

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The Doors to Reliability

by Thomas A. Westerkamp

Three issues and 10 steps on the road to long performance life and smooth operation for doors and door hardware.

Managers face three central issues when making door and door hardware decisions: ensuring ADA compliance, monitoring fire ratings, and handling daily wear and tear. Change is a constant when it comes to doors and hardware materials, specifications and applications. Perhaps the biggest challenge for engineering and maintenance managers is ensuring that facility doors and hardware meet the requirements of regulatory compliance.

Beyond compliance, however, lies performance. Managers in any facility can benefit from an inspection and maintenance program designed to extend reliability and performance life while optimizing demands on resources and keeping costs low.

ADA requirements

The objective of the Americans with Disabilities Act (ADA) is to provide equal access to facilities for all. It has had the positive result of prompting physical plant managers to review their facilities for accessibility, with special emphasis on the needs of those public facilities users with impaired speech, hearing or mobility.

Automatic doors that meet ANSI standards A117 and ANSI AL56. 19 can be installed in new or existing facilities. Features that enable easy access include:

- adjustable open and close speed
- adjustable time delay
- push-button activation
- a push and go option
- power-assist open feature.

Safety features for doors include:

- an operator that turns off if the door meets an obstruction
- a door that reopens if stopped during close
- a safety scan sensor mounted on the door that reduces contact with the door.

ADA and other compliance issues have challenged managers to find resources to help in monitoring compliance work. Thousands of hours of deferred maintenance have resulted as budgets often lag behind the workload, or low productivity limits the amount of work accomplished. A state-of-the art planning and scheduling system can provide relief for such problems.

Fire ratings

Fire ratings, based on the time it takes for fire to burn through the door, are regulated by law, and they affect owners' insurance costs. All doors have firing rating requirements that determine the materials and construction method used in their manufacture.

A building's construction plans will contain the design fire ratings of the original components. The physical plant manager must know these requirements so that the proper specifications are used when ordering or making new or replacement doors or hardware.

Daily wear and tear

The building use and number of users implies a certain level of daily normal wear and tear on doors and door hardware. Main entrances and exits, for example, receive a lot of daily wear and tear. The number of open and close cycles on some high-use buildings can be easily in the hundreds, if not the thousands.
Repair, adjustment and replacement for these applications will be much higher than for, say, emergency exits that are never used, except to test their operation or during an actual emergency. Frequency of maintenance will be much different in these two cases, even though the doors are very similar in construction and the tasks to maintain them are similar.

Ten steps to reliability

The following l0-step inspection and maintenance program will help to ensure optimum reliability and long performance life for doors and door hardware, along with high regulatory compliance, when it is used in conjunction with regular, periodic reviews of regulatory changes.

Step 1. Inventory all doors by type and location. If a building is fairly new, the plans and specifications documentation contain this information. If the building is older, some items may have been replaced. Documentation such as type of door, hardware, maintenance requirements, and lubrication and adjustment frequency is needed. Information for the replaced items may be harder to gather. In some cases, this can be obtained from the manufacturer of the replacement doors or hardware.

Step 2. Obtain recommended maintenance procedures. From the documentation, select the recommended preventive inspections, lubrication, adjustment and repair procedures. Also, check for the recommended frequency of service for repetitive tasks, such as inspection, lubrication and adjustment.

Step 3. Develop maintenance frequencies and tasks for doors and hardware that do not have documentation. If an item is obsolete, information may no longer be available from the manufacturer. In such cases, tasks can be determined from documentation for similar items. Estimate the frequency to begin with, and adjust it according to experience. If a lot of unscheduled repairs are required between scheduled inspections, lubrications and adjustments, the frequency of these preventive maintenance (PM) tasks probably need to be increased, assuming the PM was done right.

Step 4. Assign task frequency and time. Enter each task and the time required to perform it on an annual schedule. Distribute the tasks throughout the year by giving each task an identification number that is entered on the annual schedule calendar on each date it is to be done. For example, a quarterly door closer adjustment may be entered on the annual schedule calendar in January, April, July and October.

Step 5. Make the first pass at grouping the tasks into routes. It is a big advantage to group tasks that occur in the same building or area together so they occur at the same schedule time. This grouping can eliminate excess travel time. All of the door and hardware jobs that must be done in an area are done at the same time while the worker is in the area.

Step 6. Inspect the calendar for route improvements. The first time the jobs are scheduled, some unevenness may result. Too many jobs for the available resources may occur at some times and not enough at other times. By examining the schedule for this bunching of tasks, a planner can evaluate the distribution and improve it. At the same time, the planner can look for excess distance between tasks.

Step 7. Make a second pass at grouping tasks into routes. Redistribute the tasks for more even spacing over time to better use resources, and for better grouping by area to reduce travel time.

Step 8. Inspect the calendar for even distribution of tasks by date and location. Re-evaluate the annual schedule after the changes are made to look for more improvement opportunities. Seasonal considerations are important. Crews don't want to be working on exit doors in mid-winter if the facility is located in a cold climate, unless there is no alternative. If the routine preventive work is done right before the cold season, there is less likelihood repairs will be necessary during cold weather.

Step 9. Make initial assignment of door inspection and maintenance routes, and check compliance. The payoff begins when the scheduled tasks are assigned to maintenance people and the work is completed on schedule.
The planning function usually prepares compliance reports for management showing the number of jobs scheduled versus the number completed. Frequency of reporting is daily or weekly. Frequent compliance checks are the key to high compliance. If the compliance is only checked monthly, it often is too late. By then, the reason for non-compliance will be too hard to establish, and corrective action will be very hard to do.

Step 10. Follow-up involves updating the system as regulations or building occupancies change. Revisions occur occasionally based on hearings to address public concerns about the regulatory impact. These hearings can result in changes to the established maintenance practices.

If building occupancy or use changes, the number of people entering and leaving will also change, affecting wear and tear on the doors and hardware. Inspection and adjustment frequencies will have to increased to keep up with the increased traffic.

Engineered maintenance standards

In Step 6 — assign task frequency and times — the method used to apply times will affect accuracy of the backlog, which is the amount of work to be done. If estimates are used, inaccuracies creep in, due to perpetuating past delays and other problems. The best approach is to use engineered standard times and work-content comparison techniques. Key typical door jobs are planned using engineered standards. Then they are slotted into ranges of time.

Other jobs can be compared to these key typical jobs — called bench marks. If the work content is similar, the job time will be the same. Time for travel, job preparation, personal rest and minor unavoidable delay are added. With this approach, the accurate measurement of a small fraction of the jobs performed enables the planner to cover all jobs with accurate engineered times.

If the backlog is accurately known, managers can set staffing, plan jobs schedule with better chance of high schedule compliance, and crew performance management can be accomplished. This technique can be used for planning all types of maintenance work.

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Alberta Chief Power Engineers Education Conference ~ Cancelled

After 5 consecutive years of hosting its conference from inception the Alberta Chief Power Engineers Education Conference Committee made the difficult decision to cancel the 2020 conference due to impacts of COVID-19 and the uncertainty around being able to offer a safe conference for all participants and sponsors. This has not stopped the team from collaborating with sponsors to find a unique way to make an impact in 2020. A long-time sponsor approached the committee after the cancelation notice and suggested that a technical publication/brochure might be a way to continue the momentum and allow for sponsors and participants to work together and learn from each other.

Based on feedback from other sponsors the committee has decided to pursue this opportunity to support our sponsors and participants. All proceeds from this year's sponsorship will be donated to charity on behalf of the committee. Sponsors will be given the opportunity to donate by purchasing 1 or 2 pages of space in the publication to outline their business and services. The committee will also be adding some technical papers and other pertinent information for Chief Power Engineers.

We look forward to having this publication completed and circulated in November 2020 and we hope to see everyone again in person at our conference on October 26-27, 2021 in Edmonton, Alberta.

On behalf of the committee we hope you all stay safe and healthy.

If you have any questions please contact George Mitsopoulos, Vice President – Alberta Chief Power Engineers Education Committee at george.mitsopoulos@intl.cnoocltd.com

Kenken Puzzle Answer

2− 3	5	3+ 1	2	2− 4	6
2÷ 2	4	108× 6	1− 5	3÷ 3	3+ 1
30× 5	6	3	4	1	2
1	3	2	1− 6	5	1− 4
24× 6	8× 1	4	1− 3	2	5
4	2	4− 5	1	3− 6	3

TEST YOUR OPERATOR IQ ANSWERS:

Answers: 1) A 2) D 3) E 4) E 5) B

EXECUTIVE MEETING MINUTES

Building Operators Association (BOA) Executive Meeting Minutes

September 1, 2020, 5:05 pm, Virtual Meeting

Executive: Casey K, Mike T, Les A, Kyle A Carrissa S, Mark A, & Monika B

- **Trade Show postponed to May 2021**
- **Will host General Meeting on September 8, 2020 virtually at 5pm**
- **Email reminder will be sent out**
- **Guest Speaker: Dennis Aranas - Honeywell & Shawn McLean - WestExcel Automation**
- **Presentation: Honeywell Building Systems**
- **Topic : Healthy Building Initiative**

Adjourned: 6:05pm

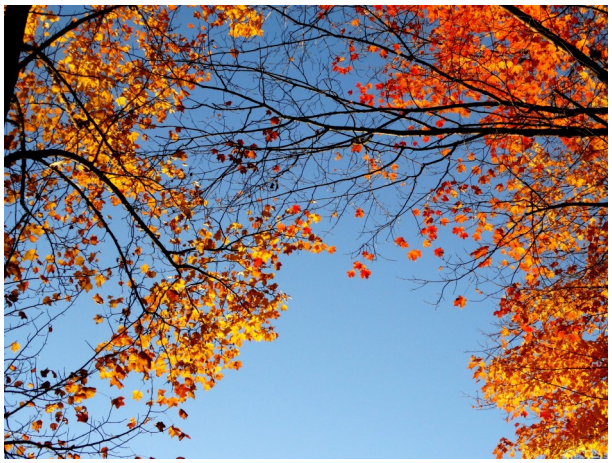
General Meeting Minutes

Chaired by: Mark Arton	Minutes by: Monika Bhandari	Call to order: 5:03pm	Webinar: September 8, 2020

New Business:

- BOA Magazine:
  - September issue – available online
  - October issue – to be mailed out
- Monika Bhandari – Editor, to take over the Magazine responsibilities from Vicki Gibbs
- Mike Thompson - Webmaster to look after new website from Casey Kok – Casey still active within BOA
- Les Anderson - President
- Mark Arton – Vice President
- Mike Gerald – Associate Vice President
- Treasurer – Carrissa Speager
- Secretary – Monika Bhandari
- Education Committee – Shaun McLean
- Activities Committee – Mike Gerald
- Technical Concerns – Kyle D'Agostino
- Tradeshow postponed until May 2021 due to Covid-19
- Invoices to Membership to be mailed out this month; can pay through paypal on www.boacalgary.com website
- Next meeting will be virtual and will take place on October 13 at 5pm – Guest Speaker will be Mike Gerald of BGE Indoor Air Quality Solutions

Guest Speaker: Dennis Aranas - Honeywell & Shawn McLean - WestExcel Automation
Topic of Presentation: Honeywell Building Systems - Healthy Building Initiative



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1/2 page	$775	1/2 page outside cover	$900
Full page	$1000		

Deadline for ads is the 10th of each month. For any questions, please email: advertising@boacalgary.com.

BOA Building Operators Association of Canada

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