



BOA

Building Operators Association of

Canada

Official Publication of the Building Operators Association (Calgary)



NEED POWER?

GENTECH FIELD SERVICES IS A TURNKEY POWER GENERATOR COMPANY SERVING CALGARY AND SURROUNDING AREAS. THE GENTECH FIELD SERVICES TEAM SPECIALIZES IN LIFE SAFETY EQUIPMENT FOR COMMERCIAL BUILDINGS AND ON CONSTRUCTION SITES. WE PROVIDE SCHEDULED AND EMERGENCY SERVICE FOR ALL COMMERCIAL DIESEL GENERATORS AND FIRE PUMPS. CONTACT US TODAY TO SCHEDULE A SERVICE OR FOR AN ESTIMATE ON A NEW OR USED GENERATOR.

OUR TURNKEY INSTALL SOLUTIONS INCLUDE:

RENTALS

PRODUCTS

ENGINEERING

SERVICE



GENTECH
FIELD SERVICES

Authorized dealer for  & 

240023 Frontier Crescent
Rocky View County T1X 0W5
587 349 3500
service@gentechfieldservices.com
www.gentechfieldservices.com



REGENCY CLEANING SERVICES

- Janitorial Services
- Window Cleaning
- Pressure Washing
- Specialty Services
- Carpet & Upholstery
- Move In / Out Cleaning
- Floor Care & Maintenance
- Post Construction Cleaning

PH: 403-520-7788 | FAX: 403-663-9911

info@regencycleaning.ca
www.regencycleaning.ca




BOULDER MECHANICAL CONTRACTORS LTD

- Complete Boiler Services
- Air Handling Units
- HVAC, Plumbing, Refrigeration
- Electrical
- Building Automation
- Gas Detection Testing & Service
- Preventative Maintenance & Emergency Service
- Retrofit / Replacement
- General Contracting

*Your partner in building
maintenance and service!*

Bay #6 6420 79th Ave SE Calgary, Alberta T3M 2B8
P: 403-230-5519 F: 403-230-5529 E-mail: j.harding@bouldermechanical.net

What's Inside?



Executive & Committees	3
Important Phone Numbers	3
Presidents Message	4
Test Your Operator IQ	6
Thermal Heat Conduction Building Envelopes	7
BOMA Building Operator Program	9
KenKen Puzzle	10
The Importance of the Logbook	11
Occupational Health & Safety Guidance For Workers	12
Test Your Operator IQ Answers	14
The Hidden danger In Your Junk Drawer	16
Nov Meeting Minutes & December Guest Speaker	17
Advertising Rates	18
BOA Calgary Sponsors	18
Advertisers Directory	19

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

Executive & Committees

President	president@boacalgary.com
Les Anderson	C: 403 921 0648
Vice President	vice.president@boacalgary.com
Mark Arton	(c) 403-305-7029
Associate Vice President	associate.vice.president@boacalgary.com
Mike Gerald	403-861-9091
Chairman	chairman@boacalgary.com
Mark Arton	(c) 403-305-7029
Treasurer	treasurer@boacalgary.com
Carrissa Speager	(c) 403-969-0329
Secretary	secretary@boacalgary.com
Monika Bhandari	(c) 403-470-4169
Education Committee	education@boacalgary.com
Shaun McLean	
Membership Committee	membership@boacalgary.com
VACANT	
Promotions Committee	promotions@boacalgary.com
VACANT	
Activities Committee	Mike Gerald (c) 403-861-9091
Mike Gerald	
Technical Concerns	technical@boacalgary.com
Kyle D' Agostino	
Webmaster	webmaster@boacalgary.com (c) 403-200-3767
Mike Thompson	



SPROUSE FIRE & SAFETY

Serving Commercial, Residential & Contractors Since 1963
Fire & Safety Equipment Specialists
Toll Free: 855.337.7776

1323 9 Avenue SE 14825 Yellowhead Trail 5329 72 Ave SE
 Calgary, AB Edmonton, AB Calgary, AB

www.SprouseFire.com info@SprouseFire.com
 100% Alberta Owned



John Rutherford
 * Boiler Service * Consults * Parts * Upgrades *

Quality Combustion & Controls Ltd

834, 3545 - 32 Ave NE, Calgary AB T1Y 6M6

Ph (403) 936-0065 Fx (403) 936-0061

jrutherford@Qualityco.ca Qualityco.ca

President's Message



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

It has been 10 months since we have entered the Isolation of the country and it is wearing hard on the Operators with-in our industry. A Building Operator has been deemed to be an essential service and the stresses of coming home every day thinking that you may be bringing the virus home to your family can be overwhelming. Operations management can do some of their work from home, not so much for the Building Operators, they must be there every day and the stresses are real. I was speaking to an Operator recently, who came from a country under siege and he likened this to living under those conditions. The need to stay healthy has become a priority if you have a cold or a flu, stay home for a set period. The daily wearing of face shields and the rules that are required of each of us has set new burdens where ones did not exist before.

The lack of operating income because of continued vacancies has put more pressures on operations. Many projects have been put on hold as revenue has fallen off and this adds pressure on maintenance budgets as well. Even with the wage subsidies offered by the government the need to reduce the staffing has added a further burden to the operators who remain. The costs of increased operating hours, the addition of higher filtration standards and the costs to purchase them. All these stresses have put a large burden on the operational costs to run the facilities.

Now the thinning of the operations staff has begun. This puts more pressure on those that remain. I wish I had an answer to the problems stated above. All I can say is that the Building Operators Association acknowledges the issues, and we will always be there if you want to reach out, lend an ear to anything you have to say. I will give you my number direct 403-921-0648. I will listen if you want to talk about anything. I feel your pain, whether you have been laid off or remain as one of the overworked. You are essential to the future; this Covid-19 Pandemic will end as there are vaccines that will be available soon. Keep yourselves and your families safe and healthy until then. Remember to take time to reflect on all that you have done to endure the hard times. We will get through this together.

Take Care and Stay Safe,

With kind regards,

Les Anderson PE, RPA

JOIN US!

For our Virtual BOA Monthly Meeting on
Tuesday December 8, 2020 at 5pm





BGE Indoor Air Quality Solutions

When clean air matters.

We deliver clean air to protect your people, places, processes, and products.



BGE Indoor Air Quality Solutions Ltd.

When clean air matters.

5711 – 103A Street NW • Edmonton, AB T6H 2J6

T: 780-436-6961 F: 780-437-1097 TF: 1-866-436-6961 • www.bgecleanair.com



DCS AGENCY LTD.

Manufacturer's Representatives for:

- Xylem / Bell & Gossett
- Watts Water Technologies / Watts Radiant
- Watts / Powers Mixing & Electronics
- Tekmar Control Systems
- American Standard Brands
- Clemmer Technologies
- Laars Boilers
- De Dietrich Boilers
- Gastite Flexible Gas Piping
- Sisco P/T Plugs
- WGI Western Gauge & Instrument
- Griswold Flow Control Valves
- Metraflex Pipe Connectors
- Rinnai

Alan Proctor Shawn Oakley Greg Smith
 #7, 6130 – 4 Street S.E., Calgary, AB. T2H 2B6
 Tel: (403) 253-6808 Fax: (403) 259-8331
www.dcsalesltd.com




Alberta Diesel Dialysis

Ensuring the Best fuel quality at the Most critical time



Mobile Fuel Polishing Services
 Permanent Automated Polishing Systems
 Western Canada Distributor for Refuel Systems
 403 813 9999
AlbertaDieselDialysis@gmail.com
www.AlbertaDieselDialysis.com



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 14

1. The purpose of "wear rings" in centrifugal pumps is to:

- a. lower the pump pressure
- b. increase the efficiency
- c. eliminate the need for a relief valve
- d. prevent wear on the pump inlet
- e. prevent wear at the pump discharge



2. The purpose of a lantern ring in a pump packing is to:

- a. replace the pump packing
- b. increase pump shaft wear
- c. distribute the sealing water to the packing
- d. increase the pump speed
- e. seal the shaft and housing

3. The purpose of shaft sealing on a pump is to:

- a. keep air in the pump
- b. keep the packing gland cool
- c. stop fluids from leaking along the shaft of the pump
- d. prevent lubricating oil from leaving the pumps
- e. protect the seal

4. The seal cage on the shaft of a centrifugal pump:

- a. holds the shaft packing against the shoulder of the stuffing box
- b. assists in reducing shaft vibration
- c. distributes sealing water to the packing
- d. prevents water from leaking out of the pump casing
- e. reduces suction pressure drop

5. The type of centrifugal pump which is inherently balanced for hydraulic thrust is the:

- a. double suction impeller type
- b. single suction impeller type
- c. single stage type
- d. multistage type
- e. triple stage



The Impact of Improving Thermal Weak Spots in Existing Building Envelopes

By Stephen Hunter, P.Tech.(Eng.), FSFE



Stephen Hunter

Senior Building Science Consultant at Building Science + Architecture Ltd.

Thermal weak spots in your building envelope can contribute significantly to heat transfer, even if they make up a relatively small area. Improving those weak spots can thus substantially improve thermal performance overall.

The U-Value of a building envelope assembly is expressed in watts per square meter-Kelvin ($W/m^2 \cdot K$) and represents the heat transfer through a $1m^2$ area for each degree Kelvin in temperature difference across it. Well insulated assemblies have low U-Values, while poorly insulated assemblies have high U-Values.

Multiplying the U-Values of each assembly by their respective areas in m^2 and summing the results gives the total heat transfer through the envelope per degree temperature difference in W/K , not including that associated with air infiltration or solar heat gain through glazing.

Consequently, the amount of heat transfer contributed to the total by an assembly is de-

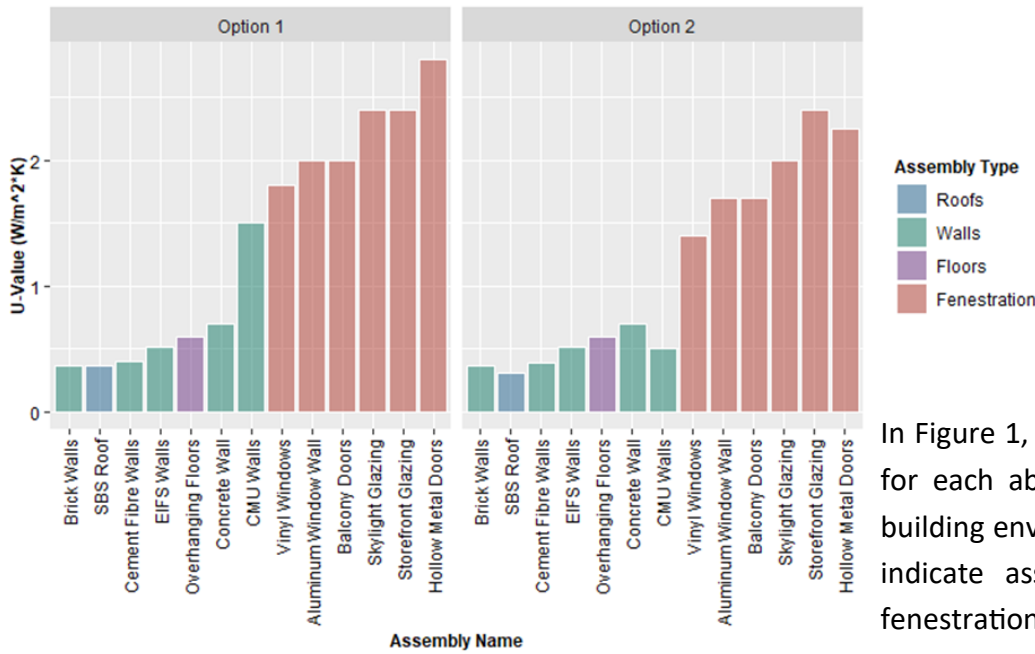
termined by both its area and U-Value. If the U-Value of an assembly is sufficiently high it can contribute substantially to total heat transfer through the envelope, even if it makes up a relatively small area.

Building envelope renovations are usually the best time to make improvements to thermal weak spots. That's when energy efficiency measures can be 'piggybacked' onto a broader scope for the least possible additional cost. Even modest improvements can have a big impact.

Take for example a design for a building envelope renovation on a 4 storey mixed use building in Calgary. The renovation includes substantial replacement of the low-slope roofing, cladding, and fenestration (windows and doors), so there are many opportunities for improvements.

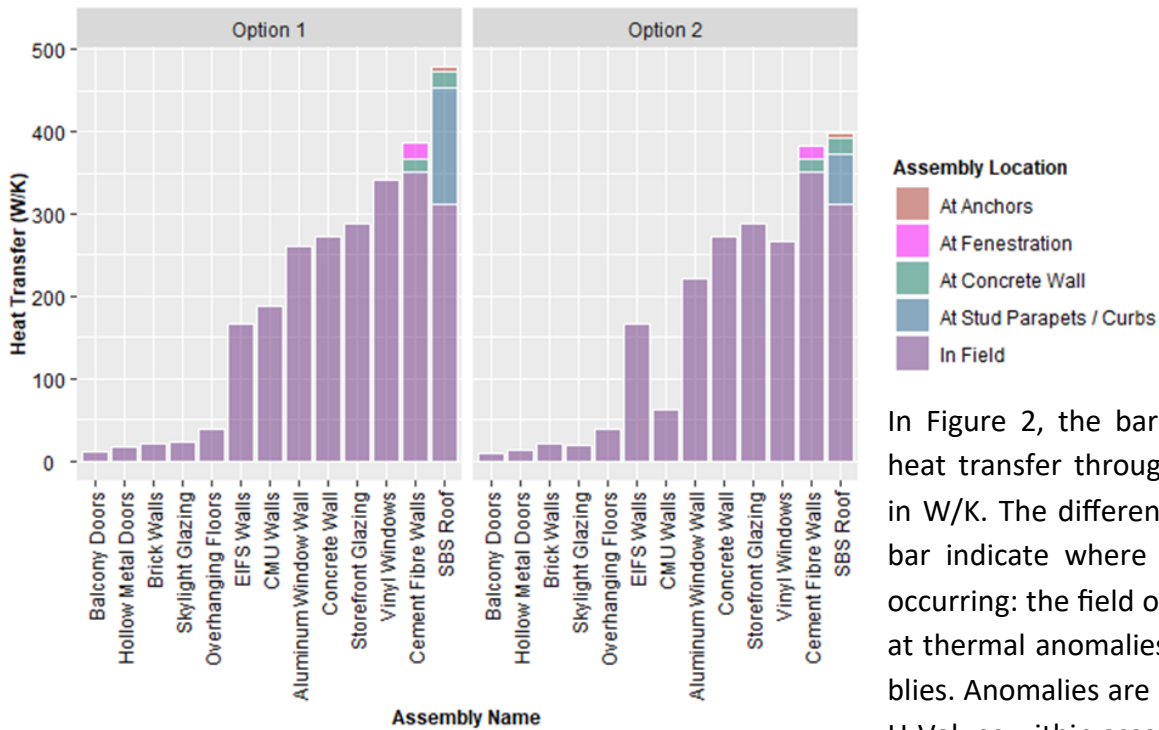
Two design options are depicted in the plots below. The first option shows the envelope design before making improvements to the thermal weak spots. The second illustrates the effects of modest improvements to only the weakest areas. To show the impact of improving the weakest areas only, everything else is kept constant.

Figure 1: Effective U-Value By Assembly Name and Type



In Figure 1, the bars show the U-Values for each above-grade assembly in the building envelope. The different colours indicate assembly type: roofs, walls, fenestration, or floors.

Figure 2: Total Heat Transfer By Assembly Name And Location



In Figure 2, the bars show the total heat transfer through each assembly in W/K. The different colours in each bar indicate where the heat flow is occurring: the field of the assembly or at thermal anomalies in those assemblies. Anomalies are areas with higher U-Values within assemblies where the insulation is interrupted (also known as thermal bridges).

BOMA

CALGARY

BOMA ONLINE BUILDING OPERATOR DEVELOPMENT PROGRAM - 150 HOURS

The BOMA Calgary Building Operator Training program is a comprehensive course that prepares students for the 5th Class ticket and provincial exam from the Alberta Boiler Safety Association (ABSA). More than just a 5th Class ticket, this course is specifically designed for commercial building operations and is instructed by veteran building operation experts. Taught over 150 hours (exceeding the industry standard), this program has a strong record of providing the industry with well educated and competent operators.

The next online 5th Class Course will begin on January 12, 2021 from 5pm to 8pm and takes place every Tuesday, Thursday until June 2021. The course fees includes the text material and the certificate. Registration is now open. Contact Jessica at info@boma.ca or 403.237.0559 for more information.



CUSTOM POWER GENERATION WESTERN CANADA'S POWER GENERATION PROFESSIONALS!

Western Canada's LARGEST **BLUE STAR** Power Systems Distributor

- 24/7 Parts and Service Support
- Emergency Generator Repair
- Planned Generator Maintenance Programs
- CSA282 Compliance Programs
- On Site Fuel Testing and Polishing

CALGARY - EDMONTON - VANCOUVER
24HR: 855-948-8810 / WWW.CW-PG.COM



BOA
Building Operators Association of
Canada

BOA Tradeshow
May 2021



CONSTANT
FIRE PROTECTION SYSTEMS LTD.

WADE WEATHERBEE
High Rise Division Manager

5442 56 Avenue SE Telephone: 403-532-3205
Calgary, Alberta Fax: 403-532-0185
T2C 4M6 Cellular: 403-703-7888
E-mail: waderw@telus.net

*Healthy Buildings
on a Sustainable Planet*



**Gasonic
Instruments**
A Member of the Gasonic Group

Bay 8, 823 - 41 Avenue N.E. Phone: (403) 276-2201
Calgary, Alberta T2E 6Y3 Website: www.gasonic.com



SURE
PRINT & COPY CENTRE AVENIDA

WE PRINT EVERYTHING!

SIGNS
RETRACTABLE BANNERS
X-BANNERS
SANDWICH BOARDS

& MUCH MORE!

DESIGN
NCR FORMS
MAGAZINES
BUSINESS CARDS
POSTCARDS
CALENDARS
LARGE FORMAT PRINT
LARGE FORMAT SCANS
BLUEPRINTS

501 - 12445 Lake Fraser Drive SE, Calgary, AB T2J 7A4
Phone: 403.254.6922 Email: sure20@surecopy.com
www.sureprintavenida.ca

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

5 -	2 -	3 -	2 ÷	10 x	
				4	
10 +	3 +		2 ÷	12 x	
	2 -			3 +	5
	3 -		5		2 ÷
2 ÷		5	5 -		

BOA Canada Magazine printed & distributed by:

SURE PRINT & COPY

CONSULTING • DESIGN • INSPECTION • TESTING SERVICES

Anton J. Vlooswyk, P.Eng.
Cel: (403) 651-1514
Tel: (403) 287-0888
Fax: (403) 287-0880
Email: anton@beci.ca



**BUILDING
ENVELOPE
ENGINEERING
INC.**

102, 4029- 8th Street S.E.
Calgary, Alberta, T2G 3A5
www.beci.ca

The Importance of the Logbook

Logs can be divided into two classifications:

1. Boiler logs
2. Daily occurrences within the facility

Boiler Logs

A logbook, in any boiler heating plant is a legal document that is required by Regulation to record such activities as maintenance work, Inspections, tests. The Power Engineers Regulation requires that a permanent logbook be updated and maintained for, boiler heating plants. This logbook should be provided in each boiler room to record maintenance work, inspections, certain tests, and other pertinent data. Brief details of repairs or other work done on a boiler plant including time started, time completed, and signature of person in charge should be recorded. The log book must be a permanent record that cannot be altered. That is to say is that it must be written in ink and continuous so that more entries cannot be done at a later time.



As technology has advanced, so have the methods of recording information. In some jurisdictions an electronic log can be acceptable if and only if it can be shown to be a permanent accurate record.

The Engineers Regulations State: Section 6

6. The chief power engineer of a power plant and the power engineer in charge of a heating plant or a thermal liquid heating system must ensure that a logbook is updated and maintained to record:
 - (a) matters relating to the operation and maintenance of that power plant, heating plant or thermal liquid heating system
 - (b) the testing and servicing of safety valves and other safety devices and controls, and
 - (c) any other matter that may affect the safety of the power plant, heating plant or thermal liquid heating system.

ASME Section 6 Part 6.09

B. Log Book. A permanent logbook should be provided in each boiler room to record maintenance work, inspections, certain tests, and other pertinent data. Brief details of repairs or other work done on a boiler plant (including time started, time completed, and signature of person in charge) should be recorded. Performance and results of tests, inspections, or other routines required by codes or laws, insurance company inspection reports, and initial acceptance test data should be recorded

Examples of Steam Boiler and Hot water heating Boilers logs can be found in ASME Section VI: Exhibits A and B

Daily Occurrence logs

Although not a requirement by law. Daily Record keeping may be a requirement by Company policy. It is good practice to keep a log of daily occurrences within a facility. Building management is a busy job and to keep a record of repairs, replacements and conversations that have gone on, is in keeping of good business practice. Operators have a busy and varied day. To have a record to review when asked of a certain event is much more professional than trying to remember.

Other logs may be: Chemical Treatment logs, Equipment maintenance

OCCUPATIONAL HEALTH AND SAFETY GUIDANCE FOR WORKERS DURING A PANDEMIC

alberta.ca/covid19

Classification: Public Find updated versions of this bulletin on the OHS Resource Portal

This bulletin gives a brief overview of occupational health and safety (OHS) information for workers who are returning or continuing to work during the COVID-19 pandemic. You can also find links to OHS resources that have more information on specific topics, on page three.

Go to alberta.ca/covid19 for the most up-to-date information on restrictions related to COVID-19.

Key information

Alberta's *OHS Act* defines fundamental rights and responsibilities for work site parties. For workers, these include the:

- right to know,
- right to participate,
- right to refuse dangerous work, and
- responsibility to work safely and ensure the safety of themselves and others.

Alberta's OHS legislation

The *OHS Act* sets minimum standards to protect and promote the health and safety of workers throughout Alberta. OHS legislation also includes regulations made under the *OHS Act*. These regulations (including the OHS Code) set specific rules and work together with the *OHS Act*.

Alberta's OHS legislation applies to most workers and employers in Alberta, including domestic workers. The legislation does not apply if you are:

- under federal jurisdiction (for example, Canadian chartered banks, interprovincial transportation, aviation), or
- a farm and ranch operations owner, family member of the owner or non-waged individual.

If you are a waged, non-family farm and ranch worker, you are covered by the basic safety standards set out in the *OHS Act* only.

Know about health and safety

You have the right to know about workplace hazards and have access to health and safety information at the work site.

Your employer has the responsibility to make you aware of your rights and duties under OHS legislation and make sure you have the skills and training to do your work safely. Your employer must also provide you information about hazards at the work site, controls used to eliminate or control the hazards, and any relevant work practices and procedures.

Hazard controls at your workplace

In addressing the COVID-19 pandemic, your employer must review and, where needed, revise your workplace hazard assessment documents to include controls for the viral hazard. An employer must involve affected workers in the hazard assessment and the control or elimination of the hazards identified.

Some COVID-19 controls are required by law. For example:

- OHS laws require employers to ensure workers have the training they need to work safely. During a pandemic, this includes training on new policies, procedures and equipment related to the virus.
- **Public health orders** may require specific controls. At time of publication of this bulletin, these requirements include:
 - A rapid response plan that sets out a fast-action plan for employers, supervisors and workers when a worker or visitor shows symptoms or tests positive for COVID-19.
 - New rules (for visitors or customers) and safe work procedures (for workers) that support hand hygiene and respiratory etiquette, and enhanced cleaning and disinfection, especially of high-touch surfaces and objects.
 - New practices that minimize the risk of transmission of infection at the work site.

Public health orders change during an emergency such as COVID-19. This bulletin was published on July 28, 2020. Check current public health orders at alberta.ca/COVID19 to make sure you know the current requirements.

Practices that minimize the transmission of infection will be workplace specific. Depending on the type of work you do and your work site, you might see:

- Rearranged floor plans, work stations and/or new physical barriers.
- New rules (for visitors or customers) and safe work procedures (for workers) that support physical distancing.
- Updated sick leave/absence policies that are consistent with public health guidelines.
- Staggered or adjusted shifts and breaks to reduce the number of workers in common areas at one time.
- Pre-screening and contact tracing procedures to prevent and control outbreaks at the work site.
- Workplace rules or guidelines about wearing non-medical masks.

Participate in health and safety

You have the right to meaningful participation in health and safety activities related to your work and the work site. Your employer is required to respond to health and safety issues raised by workers.

If your workplace has a health and safety committee (HSC) or health and safety (HS) representative, they bring work site parties together to work on activities such as preventing, identifying and controlling hazards, investigating health and safety incidents, and responding to health and safety concerns at the work site.

If your workplace does not have an HSC or HS representative, your employer must still involve affected workers when assessing hazards at the workplace and implementing control measures.

Refuse dangerous work

Workers have the right to refuse dangerous work if you have reasonable grounds to believe that there is a dangerous condition at the work site, or that the work is dangerous to you or any other person.

Health and safety hazards that are not normal for the job, or normal hazards that are not properly controlled, are considered dangerous conditions that could trigger a work refusal. A dangerous condition is a risk that directly threatens the health and safety of a worker.

Theoretical, anticipated or potential risks are not reasonable grounds for a work refusal – you should bring these to your employer's attention under the worker's general duty of reporting an unsafe or harmful act or condition.

When employers and workers work together to resolve concerns, most situations can be resolved without a work refusal. However if you are in a situation where you feel it is necessary to refuse work, make sure you follow the work re-

fusal steps that are set out in the law – including promptly reporting the refusal and the reasons for it to your employer, supervisor or another designated person. The steps of the work refusal process that both you and your employer must follow usually result in issue resolution. If this isn't the case, you can contact OHS for more information and/or file a complaint with OHS.

Refusing unsafe work does not entitle a worker to abandon the work site or refuse other work. Your employer may give you other job duties until the dangerous condition is remedied.

If your employer has implemented reasonable controls to address the risk of COVID-19 exposure – such as those required or recommended by Alberta's Chief Medical Officer of Health – the dangerous condition associated with the virus should be addressed and it's unlikely that there will be a dangerous condition under OHS legislation.

If you still feel uncomfortable with those controls, you are encouraged to discuss your concerns with your employer.

Your responsibilities

OHS legislation is based on the internal responsibility system, which says that everyone – including workers – is accountable for workplace health and safety, each according to their authority and level of control. As a worker, your obligations include:

- Cooperating with your employer or supervisor by following the health and safety rules.
- Reporting concerns about unsafe or harmful work sites or work site conditions to your employer or supervisor.
- Cooperating with any person following the OHS legislation and following the OHS legislation yourself.

Contact us

OHS Contact Centre

Complaints, questions, reporting serious incidents

Anywhere in Alberta

- 1-866-415-8690

Edmonton & surrounding area

- 780-415-8690

Deaf or hearing impaired

- 1-800-232-7215 (Alberta)
- 780-427-9999 (Edmonton)



File a complaint online

ohsComplaintsPortal.labour.alberta.ca

Online incident reporting

Potentially serious, mine or mine site incidents

oir.labour.alberta.ca

OHS website

alberta.ca/ohs

Alberta Health Services

COVID-19 public health order violations

ephisahs.albertahealthservices.ca/create-case

For more information

Do you know how to refuse dangerous work?
(PTR008) ohs-pubstore.labour.alberta.ca/ptr008

Hazard assessment and control: a handbook for Al-
berta employers and workers (BP018)

ohs-pubstore.labour.alberta.ca/bp018

Health and safety committees and representatives
(LI060)

ohs-pubstore.labour.alberta.ca/li060

Respiratory viruses and the workplace (BP022)

ohs-pubstore.labour.alberta.ca/bh022

Right to refuse dangerous work (LI049)

ohs-pubstore.labour.alberta.ca/li049

Worker's guide to occupational health and safety (LI008)

ohs-pubstore.labour.alberta.ca/li008

Go to alberta.ca/biz-connect for workplace guidance and supports to help businesses and non-profits affected by COVID-19 begin reopening and resuming operations safely.

© 2020 Government of Alberta

This material is for information only. The information provided in this material is solely for the user's information and convenience and, while thought to be accurate and functional, it is provided without warranty of any kind. The Crown, its agents, employees or contractors will not be liable to you for any damages, direct or indirect, arising out of your use of the information contained in this material. If in doubt with respect to any information contained within this material, or for confirmation of legal requirements, please refer to the current edition of the *Occupational Health and Safety Act*, Regulation and Code or other applicable legislation. Further, if there is any inconsistency or conflict between any of the information contained in this material and the applicable legislative requirement, the legislative requirement shall prevail. This material is current to July 2020. The law is constantly changing with new legislation, amendments to existing legislation, and decisions from the courts. It is important that you keep yourself informed of the current law. This material may be used, reproduced, stored or transmitted for non-commercial purposes. The source of this material must be acknowledged when publishing or issuing it to others. This material is not to be used, reproduced, stored or transmitted for commercial purposes without written permission from the Government of Alberta.



*WISHING YOU ALL A HAPPY &
SAFE HOLIDAY SEASON!*



FROM ALL AT BOA CALGARY

TEST YOUR OPERATOR IQ ANSWERS

Answers: 1) b 2) c 3) c 4) c 5) a

New pipes inside your old pipes.



**Cost Effective, Less Disruptive.
Simple as that.**

*Whether you're replacing a
drain stack in a skyscraper or
a piece of cracked cast under
the floor in a shopping centre,
we have it handled!*

- Vertical drain stacks behind walls
- Horizontal drains under floors
- HVAC and chiller pipes
- Pipes with multiple bends and offsets
- Pipes with branch connections
- 1 1/2 - 10 Inch diameter (custom sizes available)
- Inside any type of pipe (including cast iron, steel, asbestos concrete, PVC, ABS)
- 50+ year life expectancy

REVIVE
Pipe Restoration Inc.

Inside Building Specialists
403-903-4445
www.revivepipes.com

The hidden danger in your junk drawer:



All batteries can be a fire hazard, but did you know 9-volt batteries can be especially hazardous because of the closely spaced terminals?



If the two terminals come into contact with keys, steel wool, or other conductors...



...fire can ignite!

So...

Keep unused batteries in their packaging until ready to install.



Cover terminals of all spent batteries with electrical tape, or put them back in their original packaging.

Store batteries awaiting recycling in a non-flammable container.



www.canadasafetycouncil.org



General Meeting Minutes

Chaired by:
Mark Arton

Minutes by:
Monika Bhandari

Call to order:
5:03pm

Webinar: November 10, 2020

New Business:

- Introduction from Mike Arton

New Business:

Introduction from Mike Arton

Guest Speaker:

Joanne Ogilvie from Sanuvox

Topic of Presentation:

UV HVAC Applications During SARS-CoV-2 Pandemic

New Business:

- BOA Meetings will be virtual and providing relevant Covid-19 safety during this time
- Tradeshow postponed until May 2021 due to Covid-19
- Memberships can be made on our website through paypal on www.boacalgary.com
- Guest Speakers video will be posted on website and YouTube
- Next virtual (zoom) meeting on December 8, 2020, 5PM



JOIN US ON TUESDAY DECEMBER 8th AT 5PM FOR OUR VIRTUAL MONTHLY MEETING

December General Meeting Guest Speaker: Curt LaMontagne, C5 PLUS LTD.

Title: *Clearing the air: IAQ and the COVID-19 pandemic.*



Brief: There's a lot of information and advice out there regarding appropriate indoor air quality related responses to the current COVID-19 pandemic. Some of it's even worthwhile – but there's a large component that's at best misguided or just plain snake oil. Building operations should be focused on using credible sources and simple, well established IAQ principles as the backbone of their responses. There are some promising technologies in the mix, but there are no IAQ "silver bullets" for dealing with the pandemic as of yet.

Bio:

In 1988, Curt started his environmental career as one of the first US EPA accredited asbestos management planners. As such he was responsible for conducting asbestos assessments for millions of square feet across multiple school districts throughout southern California.

He's since managed indoor environmental consulting projects for all levels of business and government in both Canada and the US, shifting more in recent years to a focus on quantitative IAQ and indoor environmental quality for large office towers.

An enthusiastic educator, Curt is also a published writer and an experienced public speaker on indoor environmental issues. He's also an accomplished software developer, having written several commercial environmental software packages. Curt holds a First Class Honours degree in Philosophy from the University of Calgary, and has successfully completed the Graduate Program in Strategic Management offered by the University of California, San Diego.

Kenken Puzzle Answer

⁵⁻ 1	²⁻ 3	³⁻ 6	^{2÷} 4	^{10×} 5	2
6	5	3	2	⁴ 4	1
¹⁰⁺ 5	³⁺ 1	2	^{2÷} 6	^{12×} 3	4
2	²⁻ 6	4	3	³⁺ 1	⁵ 5
3	³⁻ 4	1	⁵ 5	2	^{2÷} 6
^{2÷} 4	2	⁵ 5	⁵⁻ 1	6	3

WestExcel Automation Ltd.

Commercial Building Automation Solutions Provider
Over 30 product lines including



Shawn Mclean, Calgary 403-404-3660 www.westexcel.ca

BOA CALGARY OPERATOR MAGAZINE ADVERTISING RATES:



1/8 page	\$200	Premium Locations:	
1/4 page	\$400	1/2 page inside/outside cover	\$850
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.



Thank you to our incredible sponsors! Your support of the Building Operators Association is invaluable!!

GOLD LEVEL SPONSORS

















SILVER LEVEL SPONSORS













BRONZE LEVEL SPONSORS















Advertisers Directory

Automation WestExcel Automation Ltd.	403-404-3660
Boiler Services Black & McDonald Quality Combustion & Controls	403-235-0331 403-936-0065
Cleaning / Janitorial Services Regency Cleaning	403-520-7788
Drain Services Revive Pipes	403-903-4445
Engineering Services Building Envelope Engineering	403-287-0888
Filtration BGE Air Quality Solutions Ltd. Alberta Diesel Dialysis	403-243-5941 403-813-9999
Fire Protection Services Constant Fire Protection Sprouse First & Safety	403-279-7973 403-265-3891
HVAC & Electrical Services Black & McDonald Boulder Mechanical Contractors Ltd.	403-235-0331 403-230-5519
Indoor Air Quality Services Gasonic Instrument Inc, Black & McDonald	403-276-2201 403-235-0331
Lighting Services Calgary Lighting Products	403-258-2988
Motor Services James Electric Motor Services	403-252-5477
Supply Services DC Sales Corporation	403-253-6808

Alberta Certified Power Engineers Online Directory

Check to see when your power
engineer certificate is due for
renewal!

<https://www.absa.ca/directories/alberta-certified-power-engineers-directory/>



Support those that support
YOU!

Next time you are looking for a product
or a service provider, please consider
connecting with one of our advertisers
& members of the Building Operators
Association of Calgary



James Electric



Motor Services Ltd.

Professional Pump & Electric Motor Repair

35,000 Square Foot Service Center and Warehouse

In-House Machine Shop & Fabrication Departments

Fully Equipped Service Vans

Certified Hydronic Designer on Staff

Calgary's Largest Replacement Motor Inventory

Largest Stock of Pumps & Pump Parts in Western Canada

Custom Built Fans and Blowers to Meet Your Specifications

ISO & COR Certified

Consumer Choice Award 8 Years Running

All Service Technicians are Trained in Confined Space Entry

Fire Pump, Booster Pump and Sump Pit Annual Inspections Available

Energy Efficient Audits and Solutions

On Call 24 Hours, 7 Days a Week

Motors

A.O. Smith, Baldor, Century, Emerson, Franklin, Fasco, Lafert, Leeson, Marathon, WEG, Teco-Westinghouse, US Motors

Pumps

Armstrong, Albany, Barnes, Bell & Gossett, Burkes, Darling, Franklin, Goulds, Grundfos, Hydromatic, Liberty, Little Giant, Monarch, Paco, Taco, Tsurumi, Xylem

Fans & Blowers

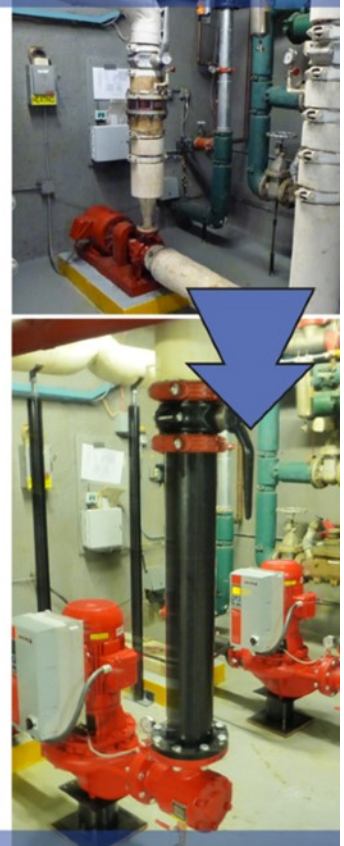
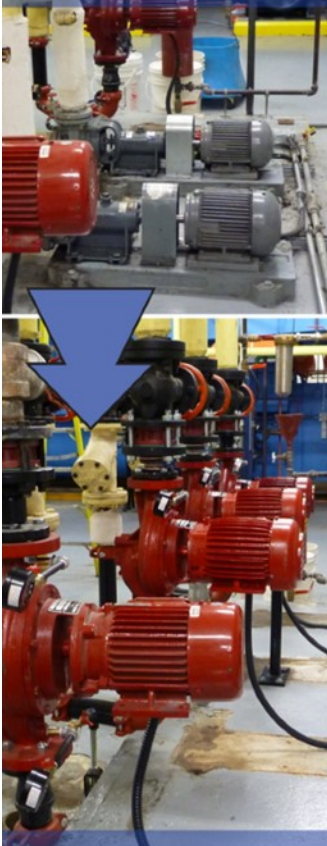
Airdex, AirKing, Broan, Dayton, Delhi, Fantech, Fasco, Greenheck, Lau, Nederman, Nutone, Schaefer, Tjernlund

Variable Frequency Drives & Motor Controls

ABB, Danfoss, Baldor/Reliance, WEG, Santerno, Teco-Westinghouse, Tornatech

Accessories

Gear Boxes, Pressure Tanks, Gauges, Bearings, Mechanical Seals, Flow Indicators, Filter Housings, Filters, Flanges, V-Belts, Float Switches, Pressure Switches, Pulleys, Sheaves, Relays, Contactors, Pressure Reducing Valves



Are your pumps leaking money?



Booster Audit

We have ability to monitor water usage and power consumption to provide the following:

- A comprehensive pre audit booster inspection
- An energy audit with an estimate of annual energy savings and potential payback.
- The "scope of work" for the installing contractor
- Start-up and commissioning on site
- Yearly maintenance inspections
- On site service 24/7/365

Grundfos BoosterpaQ

- Most efficient cascade control, application optimized software in the industry
- Single source responsibility: One manufacturer for pumps, motors, drives and control
- Plug & Play - Easy to install and commission
- Large, clear, user friendly & advanced controls interface
- Reduced floor space footprint
- Ethernet & BUS communications option
- Drinking water approvals: NSF61/372, Hygienic designed 316SS manifolds



4020 - 8 Avenue S.E, Calgary, Alberta, T2G 3A7 www.jameselectric.ca motors@jameselectric.ca

Calgary  Lighting Products

Scholarship

5th Class Course

Calgary Lighting Products
in partnership with BOA

is offering a **50% Scholarship**
towards the 5th Class Course

For more details, please contact
president@boacalgary.com

CalgaryLightingProducts.com

Need Trained Building Operators? 

'Be A Part of the First Training of Its Kind'

5th Class Power Engineering 'Building Operator' Training Program



- ▶ Our first ever program graduated nineteen 5th Class Power Engineers Building Operators
- ▶ 90% secured employment with major companies in town!

**If you are a Building Owner/
Manager and would like to:**

- know more about this training or
- be a work experience host employer or
- have recruiting advantage after completion of training

At no cost to you!

Please contact:
Monika Bhandari
Phone: 403.514.8328
Email: mbhandari@ccisab.ca
1111-11 Ave SW 5th Floor
Calgary, Alberta T2R 0G5
www.ogtp.ca

Funder by  Alberta  In Partnership with



Services

- Heating, Ventilation & Air Conditioning
- Sheet Metal
- Electrical
- Building Automation Systems
- Plumbing
- Refrigeration
- Voice & Data Communications
- Instrumentation
- High Voltage
- Process Piping
- Millwright & Rigging

Calgary Office
1071 26 St NE Calgary
403-235-0331

Capabilities

- Design/Build
- Renovation & Upgrade
- Fast-track Change-out
- Building Commissioning
- Infrared Thermography
- Facilities Management & Operation
- Planned Preventive Maintenance
- Sheet Metal Fabrication Pipe
- Complete Boiler Services
- 24-hour Emergency Service**

Facilities

- Commercial/Office
- Industrial
- Education & Institutional
- Healthcare
- Industrial
- Telecom & Data Centers
- Sports & Assembly
- Airport & Transit Stations
- Military Bases



Black & McDonald is a leader in quality service, committed to implementing innovative solutions throughout a facility's life cycle.

www.blackandmedonald.com