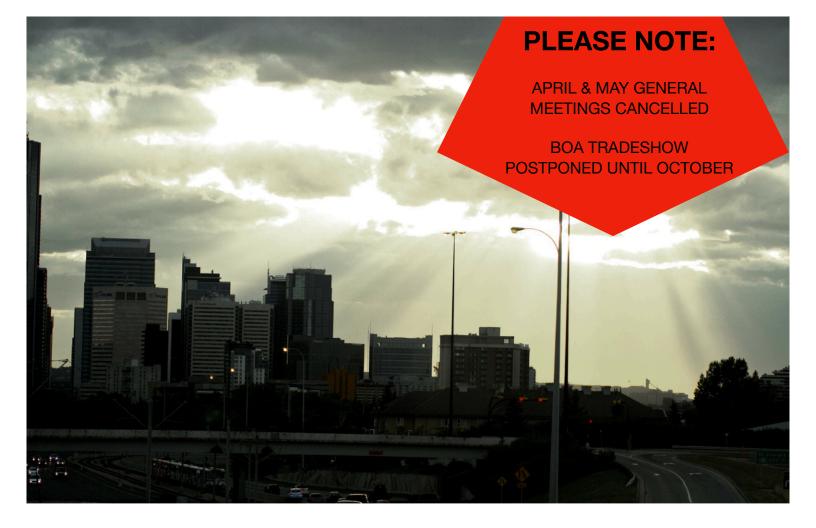


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John Rutherford \* Boiler Service \* Consults \* Parts \* Upgrades \*

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| Casey Kok                             | (c) 403-200-3767                                 |

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### Important Phone Numbers

| Emergency                         | 911           |
|-----------------------------------|---------------|
| Alberta Boiler Association        | 403-291-7070  |
| Alberta Labour (Emergency)        | .403-297-2222 |
| Buried Utility Locations1         | -800-242-3447 |
| City of Calgary (All Departments) |               |
| Dangerous Goods Incidents1        | -800-272-9600 |
| Environmental Emergency1          | -800-222-6514 |
| Poison Centre                     | .403-670-1414 |
| Weather Information (24hr)        | 403-299-7878  |





### I hope this message find you and yours well and in good health

It is hard to believe the country has been in quarantine from 4 to 6 weeks

already. I, with all my heart hope that this will pass soon. It has changed our industry in so many ways already. Building Operators has always been placed in the areas of greatest concerns to protect their tenants as well as their buildings. We have always been essential to the wellness of that which we care for. I say a prayer for you and send much love to you and yours. We have been there for floods, fires, power outages and now this unprecedented time. We will have to remain cautious when we are exposed to personal harm. Practice what we have learned on safety without variance. Being extra vigilant when it comes to washing our hands with soap for 20 to 30 seconds. Do not touch your face and be aware of social distancing by respecting everybody's personal space. Be happy and healthy until we meet again.

We have cancelled the monthly meeting for April and May we will see what June looks like. We have as well deferred the trade show to October 13, 2020.

Warm regards, Les





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### Volume 26 - Issue 8





# Alberta Diesel Dialysis

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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.

If you're ready for 21st century challenges, then you are ready for our monthly Operator IQ challenge...answers on page 17.

### 1. Expansion valves:

- a) will expand the liquid to the receiver
- b) relieve high pressure in the evaporator
- c) regulate the liquid refrigerant flow to the evaporator
- d) are used to charge the refrigeration system
- e) isolate the compressor from the condenser

### 2. In many cases evaporator pressure must not be allowed to drop below a certain level to prevent:

- a) frosting of coils
- b) evaporator valve lock
- c) tubing implosion
- d) overheating of the evaporator
- e) overheating of the compressor

### 3. Oil pressure failure switches are used to:

- a) keep to oil from freezing at low pressure
- b) prevent compressor startup if the oil heater fails
- c) separate refrigerant dissolved in the oil from the lubricant
- d) shut down the compressor when the oil pressure drops below the minimum
- e) keep the oil pressure at a level where the oil will not freeze
- 4. Pressure limiting devices shall be provided on all systems containing more than:
  - a) 9 kg of refrigerant
  - b) 7 kg of refrigerant
  - c) 10 kg of refrigerant
  - d) 5 kg of refrigerant
  - e) 3 kg of refrigerant
- 5. Refrigeration system safety controls stop the operation if the:
  - a) temperature gets too high
  - b) the pressure gets too high
  - c) pressure is too low
  - d) temperature is too low
  - e) all of the above

### ABSA: 25+ Years of Safety

Effective April 1, 1995, Alberta's pressure equipment 1923 - The Boilers Branch was transferred from safety program and services were delegated by the Public Works to the Bureau of Labour. Inspectors' provincial government to be administered by Alberta duties were expanded to include inspections to be Boilers Safety Association (ABSA), and April 1, 2020 carried out under the Factories Act and the marks our 25th anniversary.

The following is a chronology of significant events demonstrating some of the changes that have 1929 - Inspectors were given additional occurred along the way:

1897 - The first steam boilers ordinance was passed at the legislative session of the Northwest Territories, 1937 - 241 designs were surveyed. A total of 5,610 which included present-day Alberta. It is generally inspections were conducted on 4,127 separate accepted that the Boiler Explosion Act, passed in vessels. Only 3,373 vessels were issued Great Britain in 1882, was the basis for Alberta's certificates. legislation.

1900 - Public Works employed 3 inspectors who engineering certificates were issued, and 413 conducted 186 boiler and 509 vessel inspections, designs surveyed. and issued 478 certificates permitting their operation.

Territories, became a province.

1909 - A set of rules for the construction and 1970 - Design survey began to use a mechanical inspection of steam boilers was formulated for use in calculator (computer) on a time-share basis, and Alberta. These new regulations introduced the was able to process 3,633 designs without needing concept of design survey, along with the requirement to increase staff. that an 'Affidavit of Construction' be issued by the manufacturer to confirm adherence to the 1981 - 42,004 inspections were conducted, and regulations.

1912 - 3 Ford Roadster automobiles were purchased to aid inspectors in reducing the number of boilers 1995 - Alberta Boilers Safety Association (ABSA) awaiting inspection. In some areas, horse teams was formed, and many of the former Government were still being used due to the inaccessibility of the of Alberta Boilers Branch employees transferred to roads.

1920 - The first Canadian Registration Number 1996 - ABSA launched its first internet webpage, (CRN) was issued for a 40 HP locomotive boiler, establishing a new channel for communication with designed and built by the Waterous Engine Works its stakeholders. Company.

Theatres Act. They were also responsible for conducting examinations for projectionists.

responsibilities for refrigeration plants and certifying pressure welders.

1949 - A growing group of 16 inspectors conducted 8,149 inspections on 6,938 vessels. 1,386 power

1960 - The industry continued to grow: 2,002 1905 - Alberta, previously a part of the Northwest designs were submitted for approval and registration.

more than 10,000 pressure welder examinations were administered.

ABSA

Continued on page 9.....



# **KENKEN PUZZLE**

How to solve the Kenken puzzle: (answer on pg. 21)

- Fill in the numbers from 1 -6 (in this case 6, because the kid is 6x6).
- Do not repeat 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 is not in the same row or column.

| 1-  | 3÷ | 72× | 5   | 5+ |    |
|-----|----|-----|-----|----|----|
|     |    |     |     | 6+ |    |
| 1-  |    | 2-  | 11+ |    | 2- |
| 11+ |    |     | 8×  | 3÷ |    |
| 7+  |    |     |     |    | 2÷ |
|     | 1- |     | 6×  |    |    |

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### ... continued from page 7

2002 - ABSA launched the three-day Pressure Equipment Safety Legislation seminar to introduce the general legal requirements pertaining to pressure equipment safety in Alberta.

2005 - Manufacturing shops in Alberta completed construction on more than 25,000 pressure vessels; at this time, there were more than 500,000 operating pressure vessels in Alberta, and more than 18,000 certified power engineers.

2006 - ABSA's head office relocated to its present location in the Edmonton Research Park.

2016 - ABSA began to accept some types of design submissions electronically.

As can be seen, ABSA's programs and services have grown significantly over the years, from its

initial establishment as a branch of government in the early 20th century, to its transition into an independent not-for-profit delegated administrative organization and the continued implementation of its pressure equipment safety programs more than one hundred years later.

ABSA currently employs 150 people, and continues to rely on the support it has earned from industry, both in terms of its support for ABSA's role in the province, and in terms of industry's own active and continued involvement on the front lines of pressure equipment safety.

Reprinted with permission from ABSA. Article from March 2020 ABSA Pressure News.

https://www.absa.ca/media/2183/v25-iss1-2020march-the-pressure-news.pdf

### ABSA Information Bulletin No. IB20-005

### Alberta Municipal Affairs

Reprinted with permission from ABSA - the pressure equipment safety

INTERPRETATION Requirements for Reduced Supervision In accordance with the Power Engineers Regulation (AR85/2003)

This information Bulletin establishes that ABSA document AB-528 Requirements for Reduced Supervision of Power Plants, Thermal Liquid Heating Systems, and Heating Plants, Edition 3, Revision 1, issued on February 18, 2020, specifies the technical and supervision requirements that must be met by an owner to operate a power plant, thermal liquid heating system, or heating plant with reduced supervision as permitted respectively under Sections 2.1, 3.1 and 4.1 of the Power Engineers Regulation.

Information Bulletin IB 18-022 issued December 21, 2018 is hereby rescinded.

### Background

"Reduced supervision" was introduced with the 2013 amendments to the Power Engineers Regulation. The owner may choose to operate a plant with reduced supervision, provided the plant is operated in compliance with both the Power Engineers Regulation and the requirements specified in the AB-528 document.

AB-528 was revised to address the recent amendment to the Pressure Equipment Exemption Order that exempts certain thermal liquid heating systems from the Power Engineers Regulation.

Mike Poehlmann, P.L.(Eng) Administrator for Pressure Equipment

Chief Inspector, ABSA the pressure equipment safety authority

February 18, 2020

April 2020

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### **COVID-19 and Fresh Air Ventilation**

IAQ Alert: 18-Mar-2020



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**Quick Summary**: It's very likely that increasing fresh air ventilation in the workplace will help protect occupants from contracting COVID-19.



"... the [COVID-19] virus is transmitted primarily through respiratory droplets ... bringing in more outdoor air in buildings with heating and ventilation systems ... helps dilute airborne contaminants, making infection less likely."

> Dr. Joseph G. Allen Director, Healthy Buildings Program Harvard T.H. Chan School of Public Health

A single-minded focus on disinfecting surfaces overlooks a simple way to potentially diminish the spread of the COVID-19 virus in buildings. Both Harvard University<sup>1</sup> and the US Occupational Safety and Health Administration<sup>2</sup> are recommending increasing fresh air ventilation as a mitigation strategy.

These are the facts:

- The virus spreads mainly from person-to-person ... in the form of *respiratory droplets* produced when an infected person coughs or sneezes.<sup>3</sup>
- There is new evidence to indicate the virus can remain airborne for several hours, especially in poorly ventilated spaces.<sup>4</sup>
- There is a great deal of evidence to indicated increased fresh air ventilation reduces occupant sickness even in normal times.<sup>5</sup>

There are good reasons to add increased fresh air ventilation to your mitigation strategy for at least the duration of this pandemic, and little reason not to do so (any marginal cost of increased energy being a false economy in the first place).<sup>5</sup>

For further information, please contact:

Curt LaMontagne Principal Consultant, C5 PLUS LTD. curt.lamontagne@c5plus.com +1 403 770 0215

<sup>&</sup>lt;sup>1</sup> https://www.nytimes.com/2020/03/04/opinion/coronavirus-buildings.htm

<sup>&</sup>lt;sup>2</sup> https://www.osha.gov/Publications/OSHA3990.pdf

<sup>&</sup>lt;sup>3</sup> https://www.cdc.gov/coronavirus/2019-ncov/prepare/transmission.html

<sup>4</sup> https://www.nejm.org/doi/10.1056/NEJMc2004973

<sup>&</sup>lt;sup>5</sup> https://www.youtube.com/watch?v=yAk0kWHqiVU

# Boilers and Water Heaters: Spotlight on Safety

*Training, maintenance and smart decision making can help managers maximize the investment in essential technology* 

Today's generation of boilers and water heaters is more efficient, more reliable, and safer than any previous generation. But accidents still occur, and boilers still fail before they reach their rated service lives. Nearly two-thirds of boiler failures result directly from poor operating and maintenance practices, and most unscheduled interruptions of services also are the result of poor operating and maintenance practices.

Effective maintenance can go a long way to improving safety but only if the maintenance program addresses specific safety measures.

Technicians should start with the safety-relief valve, which is the boiler's last line of defense against overpressure. Scale and other contaminants in the water system or plugged discharge lines can interfere with the valve's operation. Operators must test these valves each time they start a boiler, and they must perform additional testing at intervals the manufacturer recommends.

Flame-safeguard controls also require regular testing. These controls ensure the boiler lights, operates and shuts down properly. Typical operation includes purging of combustible gasses from the boiler during start-up to reduce the risk of an explosion. The flame-safeguard control verifies all other safety interlocks are closed before ignition. When a boiler shuts down, it initiates a purge cycle designed to eliminate combustible gasses. Depending on the size and type of boiler, technicians might need to inspect the flame-safeguard control daily or weekly.

Finally, the low-water-cutoff control shuts down boilers in the event of a lost water supply, which can cause overheating and permanent damage. The controls are reliable, but components can fail, resulting in a false indication of the boiler's water level. Again, depending on the size and type of boiler, operators might need to visually confirm each day that the boiler's water level is as indicated.

Operators must not simply assume that if a boiler's safety indicator lights and alarms are normal, everything is okay. Lights burn out, and alarm contacts fail or are disconnected. Most operating panels include a test button for indicator lights and alarms. Operators need to use it regularly. — James Piper, P.E.

James Piper, P.E., is a national facilities consultant based in Bowie, Md. He has more than 35 years of experience with facility maintenance, engineering and management issues.

Article reprinted with permission from "Maintenance Solutions" Magazine. For more information or more articles, please visit their website at: www.facilitiesnet.com/ms/

### Suggestions for Improving the Quality of Cleaning Contract Services

Written by Les Anderson

Does the contractor provide its staff with scheduled tasks & work routes mapped out to insure nothing gets overlooked?

Does the site supervisor/account rep. follow up and regularly inspect the quality of service performed?

Are your premises inspected at regular intervals? Is this during your busy periods as well as following typical heavy duty cleaning periods (i.e. overnight cleaning inspected first thing in the morning)?

Are client satisfaction surveys conducted throughout the year? With you as the Landlord and with your Tenants?

Does the contractor employ an internal control auditor to ensure that customer expectations are met?

Identify training provided to staff at hiring. During the first 3 months and ongoing?

Is training provided by in-house trainers or external educational institutions/organizations?

Environmental polices and practices? (need to include this to standards yet to be determined but several are quoted in LEED EB and BOMA Go Green).

Ensure that all products used for cleaning meet

the Eco-Logo Program's criteria of "Green" products. The Environmental Choice Eco-Logo program is the authoritative source for recognizing "Green" products in Canada. It is both reputable in its design (criteria developed by a muti-stakeholder process) and management (approved companies/products are subject to 3rd party audits), and therefore it would make sense for Your Company to use this as your benchmark (products used must be Eco-Logo products), provided it is not costprohibitive.

How regular is your direct communication with your site supervision? This would include both the shift and account supervisors for your property.

Does the contractor perform any form of Quality assurance for your site(s) and communicate the results with their staff and you the client. Assuming they do this with reference to actual site visits, do they vary the time of the site visits? Is this necessary?



### March General Meeting Minutes

| <b>Building Operators Association</b> |                 |                |                                  |  |
|---------------------------------------|-----------------|----------------|----------------------------------|--|
| Chaired by:                           | Minutes by:     | Call to order: | Location & Date: Danish Canadian |  |
| Mark Arton                            | Monika Bhandari | 5:05pm         | Club, March 10, 2020             |  |

- Introduction of Attendees
- Safety Talks!
  - Emergency Equipment Spring and Fall Checkup
- Guest Speaker:

Name: Spencer Grant, Chisholm Industries Topic: Top 10 Overlooked Predictive/Preventative Maintenance Items!

- New Business:
  - James Electric Gift card \$200 draw at the end of the year for those Operators attending 4 out of 9 meetings in the year
  - BOA Bi-annual Trade Show will take place on May 12, 2020 from 2pm to 6pm at the Danish Canadian Club
  - Associations attending Tradeshow: IFMA, BOMA, CREW, AEE and IPE
  - Finger food will be provided
  - Impark providing free parking in 2 identified lots close to venue
  - Booths available at \$350 per booth, lots of vendors and building operators attend, draw prizes and 50/50 (proceeds will be donated to charity)
  - The Canadian Fire Alarm Association is holding a Technical Seminar on Wednesday April 8 at the Coast Plaza Hotel from 7:30am to 4pm. Please visit: www.cfaa.ca/EducationSeminars.aspx.
- **50/50 draw**: \$19.50 Winner: Randy Kiez, from EXP.
- Motion put forward by Monika to adjourn meeting and seconded by Les; motion approved
- Meeting adjourned at 6:30pm
- Networking

### March Executive Meeting Minutes

### **Building Operators Association (BOA) Executive Meeting Minutes**

March 5, 2020, Co-op, 11th Ave SW, AB, 5:05 pm

Casey K, Mike G, Mike T, Carrissa S, Les A, Mark A, and Monika B

### Agenda:

### **Trade Show**

- On May 12, 2020 at Danish Canadian Club, from 2pm to 6pm; set up at noon until 2pm; tear down after 6pm
- Approximately 30 booths capacity, cost: \$350, will be offered to Exhibitors from last Trade Show starting until March 15; will open to all other Exhibitors thereafter
- 50/50 draw to take place; money raised to go to Veteran's Food Bank
- To advertise and share the Tradeshow within everyone's network
- Banners with Sponsors to be printed
- Epic Building Services, Gentech Field Services and Cougar Technical Sponsors Platinum Sponsors

### Adjourned: 6:05pm

### SUMMARY OF UNSAFE CONDITION, ACCIDENT, AND FIRE REPORTS

ABSA's mandate is to administer the Safety Codes Act and associated regulations, and to deliver safety programs as they relate to pressure equipment. Our ultimate quality objective is to prevent injury to people and damage to property arising from the operation of pressure equipment. When incidents do occur, a proper and thorough investigation can help us to learn from past mistakes, decreasing the likelihood of repeating an accident. Unfortunately, this year, there were eight injuries to personnel related to pressure equipment safety in Alberta:

- Three workers were injured when a natural gas leak in a compressor skid resulted in an explosion and fire.
- One worker was sprayed in the face with a process fluid after operating a pressurized valve.

• Four workers were sprayed with hot water when they removed a blind flange from a boiler they thought had been depressurized during a planned outage.

Equipment owners are reminded that Alberta law requires that unsafe conditions and accidents related to pressure equipment be reported in a timely manner. Information Bulletin IB18-004: Reporting Unsafe Conditions, Accidents and Fires, clarifies the classification of incidents and gives reporting requirements for various types of events. ABSA publishes a list of accident and incident summaries on our website – it can be found at <u>www.absa.ca</u> under the 'Unsafe Condition, Accident & Fire Reporting' menu, by navigating to 'Summary of Unsafe Condition, Accident & Fire Reports'.

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# BOA CALGARY TRADE SHOW RESCHEDULED UNTIL OCTOBER 2020



Spencer Grant, Chisholm Industries and Les Anderson, BOA Calgary



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### APRIL AGENDA

BOA CALGARY GENERAL MEETING

APRIL AND MAY GENERAL MEETINGS HAVE BEEN CANCELLED.

### Kenken Puzzle Answer

| 1-3              | <sup>3+</sup> 2 | <sup>72x</sup>  | ໍ5               | <sup>\$+</sup> 4 | 1                      |
|------------------|-----------------|-----------------|------------------|------------------|------------------------|
| 2                | 6               | 4               | 3                | <sup>6+</sup> 1  | 5                      |
| <sup>1-</sup> 4  | 3               | <sup>2-</sup> 1 | <sup>11+</sup> 6 | 5                | 2-2                    |
| <sup>11+</sup> 6 | 5               | 3               | <sup>8×</sup> 1  | <sup>3÷</sup> 2  | 4                      |
| <sup>7+</sup> 5  | 1               | 2               | 4                | 6                | <sup>2÷</sup> <b>3</b> |
| 1                | <sup>1</sup> -4 | 5               | <sup>6×</sup> 2  | 3                | 6                      |

### MARCH GENERAL MEETING ATTENDANCE

Les Anderson Corey Arsenault Leonard Maglalang **Braeden Davis Brian Smithson** Ricardo Sanabria Kyle D'Agostino Randy Kiez Brent Hamezuck Trevor Sinkovich Rinchen Dakya Bill Graham Dennis Sievers Mark Arton Casey Kok Jommie Libres Jr. Long Nguyen Neeraj Kuppat Joseph Owade Mike Thompson Duane Dys Sandy Mackenzie Roy Beauvais Bill Thompson Steve Rumble Mike Bakk Paries Johnson Jarrod Johnson Monika Bhandari

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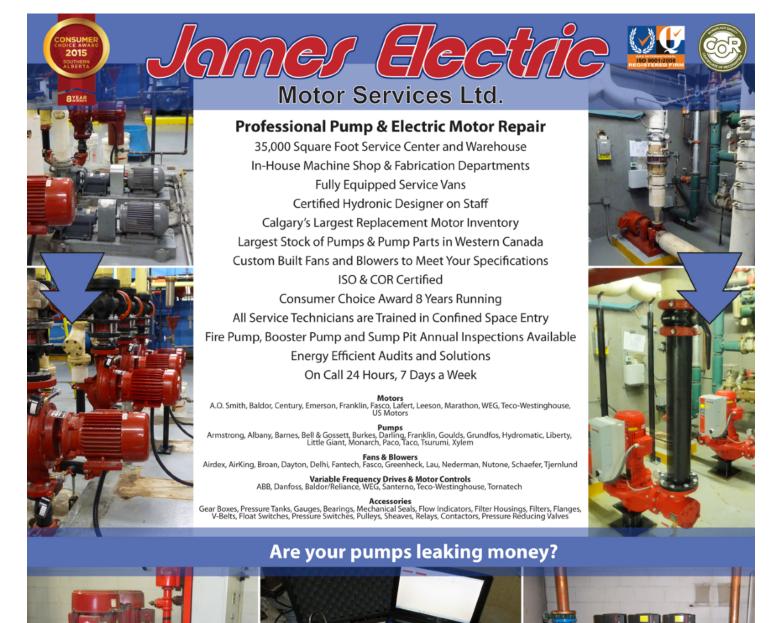
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- Reduced floor space footprint
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### 5<sup>th</sup> Class Power Engineering 'Building Operator' Training Program



Our first ever program graduated nineteen 5<sup>th</sup> 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 recruting advantage after

In Partne

rship with

(Jaib)

completion of training

Alberta

Funded By:

Canada

### 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

### Black & McDonald

### 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.blackandmcdonald.com