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What's Inside?

Executive & Committees

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

Important Phone Numbers

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President's Message

BOA
Building Operators Association of Canada
Building Operators Association
Box 22116, Bankers Hall
Calgary, AB T2P 4J5
www.boacanada.ca

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

The YouTube videos on information we have shared since September on the Covid-19 virus and how it can affect the workplace are finally finding some traction with Building Operators. The meetings guest speakers have clarified some information and even raised other questions that should be answered. The Association is encouraged to continue to provide videos on operational standards. We have learned that ASHRAE has encouraged buildings to run their buildings in a manner that will exchange as much air as possible into occupied rooms and that means longer hours of operation as well as increasing the exchange of outdoor air to the facility. We all agree to the theory, but we need to teach the practical, that once we bring in outdoor air into the spaces we occupy, we then need to condition it. If the air is too warm the need to cool it, if it is too cool then heat must be added. The addition of the treatment requires energy. Energy is money, and we must not be wasteful.

Managers require the efficient use of the energy. The building Operators Association is looking to do a series of videos on efficient and effective management of systems. We have had guest speakers in the past who were specialized in the above. We will begin with some fundamentals such as ventilation. The movement of air through the system and we then look at measuring, monitoring, and controlling.

So, with the help of our friends and associates we will assemble a series of videos. Our first will be working with Brian Stringer of Epic Building Services. I hope to bring back such good speaker as Craig Hatch of CFMS who did a great talk on the recommissioning of HVAC systems. I believe our work in education has developed another facet. One that is appropriate to the operators of today. Our first one will be on the theory of ventilation and we then can build on that. We have a you tube channel where we have been putting our virtual monthly meetings. We will continue to use that medium.

To view what the Association already has in place, please go to our website, and follow the links. If you would like to present to the Building Operators Association, please text me or call.

Please, Stay safe and be kind to one another. Smiles))

With kind regards,

Les Anderson PE, RPA

zoom

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MEETING ON TUESDAY FEB 9, 2021 AT 5PM

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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 18

1. A closed type expansion tank in a hot water heating system must:

a. be full of water at all times
b. have a vent open to the atmosphere at all times
c. be located three meters above the boiler
d. be located no higher than the top of the boiler
e. be partially filled with air at all times

2. A hot water boiler is protected from over pressure by a/an:

a. safety pop valve
b. high limit pressure control
c. expansion valve
d. air release valve
e. safety relief valve

3. A pressure or altitude gage for a hot water boiler:

a. must be equipped with a siphon
b. shall have a dial scale at least 3 times the maximum allowable working pressure
c. does not require a siphon
d. must have a temperature dial
e. must be of 51 mm pipe size

4. An altitude gage on hot water heating boilers is used to indicate:

a. expansion tank temperature
b. boiler temperature
c. furnace draft
d. height of the highest radiator in system
e. the height of the boiler

5. An automatic fill valve:

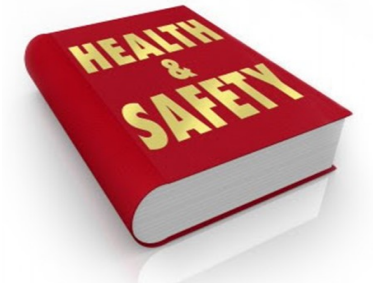
a. will maintain maximum system pressure at all times
b. is a mandatory fitting
c. is not mandatory
d. opens only when expansion tank level is low
e. Can be used with an open tank system

Generic LOCK OUT TAG OUT PROGRAMS don't work and they will not pass in OH&S Court!

In your company APPROVED written Lock out Tag Out program generic lock out tag programs or cookie cutter programs do not work to meet the needs of current legislation.

Yes the law does say you need a written lock out tag out program at work but it MUST work for your site and workers!

It's easy to see the appeal of generic lockout procedures. Generic procedures allow hundreds of machines to be covered by just a few dozen lockout procedures. But trust me when I say this the courts will not buy it if it DOES NOT MATCH your risks and items needed to lock items out!



Creating and maintaining a lockout-tagout program can be a significant time and hazard assessment review investment. To save time, many companies attempt to create generic lockout procedures for their equipment. If the lockout procedures are simply text-based documents, this might be feasible. However, more and more companies are creating graphical lockout procedures, with pictures of the machine and its energy sources to better aid workers in performing lockout. For companies looking to create a safe and efficient energy control program, graphical is the best choice. However, for the program to have the highest success, individual lockout procedures will need to be made for each machine.

YES! Many safety personnel also see generic procedures as less work when it comes to the annual inspection and overall program maintenance. However, unless the machines are perfectly identical, generic procedures simply don't work well in a graphical program.

Consider the graphical lockout procedure's layout: there is the header information about the unit, which can be generalized, as well the energy source types, which may be the same for each unit. But then there are the pictures, which in many cases will look drastically different for each unit.

With all of the unique differences between units machines, vehicles or equipment, the only way a generic lockout procedure can cover them all is by using general wording such as "locate the corresponding energy disconnect and lock out" and by including a few different pictures of each scenario. At this point, think of the authorized employee who is supposed to be using this lockout procedure. Is there really any useful information here?

If the generic lockout procedure isn't providing any useful information such as which breaker to throw, where the machine-specific disconnect is located, or what type of lockout device is needed, what incentive is there for the employee to use the procedure at all? The employee may glance at the procedure the first time they lock out the unit, but after realizing the procedure doesn't provide any information the employee doesn't already know, it is unlikely the employee will ever use the procedure again. This leads to employees guessing on how to properly lock out the machine, or worse, locking out the wrong disconnect. If improper lockout is possible on simple rooftop equipment with

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KenKen Puzzle

How to solve the Kenken puzzle:

(Answers on page 18)

- 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÷		6+		5−	6×
2−	5+	11+			
		5+	10+		1
3÷	5		2÷		11+
	5−	1−		4	
5			72×		

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Continued from page 7…

equipment with a generic lockout procedure, imagine how ineffective it may be for large systems.

Machine-specific lockout procedures are the best option. They provide clear direction as to which energy sources need to be locked out and where they are located. If a disconnect isn't labeled or a breaker panel is missing its schedule, the machine-specific lockout procedure can identify exactly which point needs to be isolated for the machine. For the majority of equipment, the safest option is to create a unique lockout procedure with unique pictures.

There are a few situations that may warrant a generic lockout procedure. Simple machines that are identical, with local disconnects for all energy sources, set up in the same way, may be able to use generic lockout procedures. This may be useful for exhaust fans, provided the disconnect is located on the unit itself, or overhead doors in shipping that all have a switch right next to the door. Make sure units are actually the same with the same disconnect type and magnitude. If deciding to make generic procedures for simple units where the disconnect is not right next to the unit, be sure to label everything. Label the machine, label the disconnect, and make sure the labeling is easy to understand. If there is any chance of confusion, a machine-specific procedure should be created instead.

YOUR RIGHT TO KNOW

The best way to confirm a machine will be properly locked out each time is to develop a unique lockout procedure for each unit/vehicle or piece of equipment.

Terry Penney

Senior OH&S and Env. & Reg., Professional, Presenter, Motivational Safety Speaker and Safety Program Development.

Article reprinted with permission

Spotlight: Defibrillators

from www.americanheart.org

Automatic external defibrillators (AEDs) have become a more common sight in public areas of facilities in recent years. Their presence is a reflection of the growing realization that quick action in the event of a heart attack can save lives.

A campaign by the American Heart Association has brought greater awareness to the role that AEDs can play in saving lives. An AED can check a person's heart rhythm and recognize a rhythm that requires a shock. It also can advise the rescuer when a shock is needed. The device uses voice prompts, lights and text messages to tell the rescuer the steps to take.

The association supports placing AEDs in targeted public areas, such as sports arenas, office complexes, doctor's offices, and shopping malls. In such cases, it also encourages that they be part of a defibrillation program in which persons responsible for using the device are trained in CPR and how to use an AED.

As for system maintenance, the American Heart Association recommends conducting schedule preventive maintenance that, at a minimum, checks:

- placement of the device
- battery installation and expiration
- the status/service indicator light
- exterior components and sockets for cracks or other damage
- needed supplies, including razor, towel, barrier device, scissors, extra battery, disposable gloves, and extra set of electrode pads.

For more information on AEDs, visit *www.americanheart.org*

Striking a Balance: Occupant Comfort vs. Energy Efficiency

by David Kozlowski

Streams of too-warm, too-cool complaints? Today's technology offers solutions.

They stream into maintenance and engineering departments daily: complaint calls about the HVAC system.

Depending on the facility, about half of these calls can be attributed to personal, subjective definitions of comfort. But the others stem from real HVAC problems: equipment out of calibration, air distribution problems due to construction, dampers not responding correctly.

The easy solution used to be applying energy. Increase air flow, crank the thermostat up or down, open dampers more, let the reheats go wild. But since the energy crisis of the 1970s, the energy solution has proven troublesome for its effect on budgets.

The pay-me-now-or-pay-me-later scenario trades the expense of comfort for the cost savings of energy efficiency. On top of that, spending more up front hurts facilities' chances of using the money later to correct the problems that caused the expense up front.

This is the ongoing struggle for maintenance and engineering departments: ensuring comfort while maintaining or reducing energy costs. Today, comfort and energy efficiency are closer than ever to being in balance because of the technology available to facilities professionals.

Inherent difficulties

Maintaining good indoor air quality for occupants of health care and higher education facilities is challenging. Take higher education, for example.

"Temperature control in our residence halls is by floor or wing, so you have some rooms that are too warm or too cool," says Bob Bertraum, director of physical plant at Castleton State College in Castleton, Vt. "What happens? Students open their windows when they're too warm. That drives the heat on. Now the cold people are happier, but more people complain that it is too warm."

Hospitals have their own special problems with demanding comfort requirements, says Richard Seguin, senior energy management consultant with Raiser Foundation Health Plan's National Facilities Services.

"Exam rooms have to be one temperature and offices are another," he says. "An exam room really can't have a range of acceptable temperatures because you have people taking their clothes off. Sometimes, people in the offices want the same consistency of temperature. Add more people in an office or a meeting room than the system is programmed for, and you have all sorts of real and imagined problems. This represents our daily challenge."

Into this muddle of inherent difficulties throw demands to cut energy costs. Whether it is competition in health care or stagnant budget trends for higher education, energy costs are a big deal.

Control Solutions

One technology helping managers meet the challenge is the energy management system (EMS). Considered by some facility professionals to be one of the most underused but important technologies at a facility's disposal, the EMS can save energy and improve the maintenance department's productivity.

The heart of any EMS is direct digital controls (DDC). While DDC provides a little more accuracy and range of comfort points than would not have been possible with pneumatic systems, their chief benefit may be in helping to centralize system control by accurately feeding data back to a computer.

"We really try to use our DDCs as much as possible," says Scott Ramsey, project manager with Facility Projects Services at the Mayo Clinic in Rochester, Mim., which includes about 4.5 million square feet of space. "With DDC, you can compare so many different variables."

The EMS at Mayo runs customized specifications that optimize individual control of rooms. A thermostat-like device installed in every room responds to manipulation plus or minus 2 degrees from a setpoint.

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The EMS at Mayo runs customized specifications that optimize individual control of rooms. A thermostat-like device installed in every room responds to manipulation plus or minus 2 degrees from a setpoint. Up to the 2 degree limit, the HVAC system will respond.

Ramsey says the system shows how important individual control is to being comfortable. People seem happier when they sense they control the environment.

"Happier means more productive people," he says. "And even slight productivity gains to an organization's bottom line can far exceed energy cost savings."

Friendly technology

Despite what Ramsey sees as a range of technical expertise in any facility department, he says many EMS really need no special training to operate. Seguin concurs: "The advances in the EMS has been the ease of use."

Today' s EMS and DDC combination helps save energy and preserve comfort by eliminating temperature fluctuations. EMS can shut down fans not needed and prevent equipment start-ups during peak demand times. When demand for HVAC is high, the system has to respond to preserve comfort, says R. Michael Herran, energy management and technical systems manager at Duke University.

"During lower demand periods, the building HVAC load is reduced, and some excess equipment capacity can be turned off and still maintain comfort," Herran says. "How this can be done without an EMS is beyond me."

Facility professionals also are turning to other technologies to balance comfort and energy.

"I think new technology should be and is headed in the direction of making comfort and energy efficiency a viable option for all us," Kaiser Permanente's Seguin says. "Heat pipes pretty much stand alone in this area."

Heat pipes use the phase-change energy transfer capabilities of fluids to move heat from areas where it's not wanted to areas where it is.

A heat pipe can quickly transfer heat from one point to another without the need of energy input. Heat pipes are often referred to as superconductors of heat because they possess a heat transfer capacity with almost no energy loss. The result is not only the tempering of air but the desiccation of it, as well.

Monitor matters

Another energy technology getting more attention is C02 monitors. If a C02 monitor detects a decline in the parts per million of C02, the mix of outside air into the system could be reduced, as can extra energy needed to condition outside air.

"This is important because if we could get a better control on outside air, I think we could stand to gain a large efficiency benefit," says Mayo Clinic's Ramsey.

Current C02 monitor technology is a good start, he says, adding that facility professionals still have a hard time getting a good enough read on C02 in a room. For instance, it is difficult to distinguish be-

tween C02 brought in from the outside and C02 measure in the exhaust air from the room because the mix in the room contains C02 from both sources. "In addition, C02 amounts can change quickly in a room, and I don't know if the system could keep up with changes and still provide comfort and energy efficiency," Ramsey says.

To provide better comfort with a only a little energy loss, some facilities, particularly hospitals, are turning to increased air filtration. Colin Yennie, section head with Facilities Services at the Mayo Clinic, says that 10 years ago, increased filtration — the use of 80 percent filters, for example — might have had a real negative draw on the energy budget. New filters, however, affect energy only slightly.

"We've turned to using 80 percent filters and in some cases 90 percent filters because this allows us to really cut down on dust," Yennie says. "While not a direct energy gain, it has allowed us to cut down on maintenance on the ducts. Reducing dust in the ducts, in turn, helps improve energy efficiency."

The balance between occupant comfort and energy efficiency will depend on the nature and location of any particular facility. The gap between the two, however, has declined dramatically, due largely to a steady stream of new technology.

"I believe energy efficiency is an ongoing process of man and machine," Duke University's Herran says, adding that huge leaps in new technology are probably not going to come along any more. "Now the challenge for facility professionals is using the right technology in the right place and in the right way. That is where our next gains will be made."

The Human Side of Technology

Having the right technology is only half the battle in balancing comfort and energy efficiency. The other half is manpower. While HVAC technology is more user friendly than ever, someone still has to apply and maintain it.

"Technology is an excellent tool, but it is not the magic bullet," says R. Michael Herran, energy management and technical systems manager with Duke University. "The art of proper application of equipment sequencing and control system calibration is still necessary no matter what the technology."

No matter the complaint, if the energy management system is showing discrepancies, someone has to check find out what or who is right, says Colin Yennie, section head with Facilities Services at the Mayo Clinic.

"What is the cause of the problematic data we're receiving?" Yennie asks. "Has something gone out of calibration, or are there just too many people in a room? We address problems immediately and on an individual basis, and this is our check on the system."

A big problem with technology for most facility professionals is keeping instruments in calibration.

The need to keep controls accurate to provide the most comfort for the least amount of energy is driving the Mayo Clinic to consider hiring a full-time person to do nothing but measure and adjust controls calibration. Richard Seguin, senior energy manager for Raiser Permanente is not sure that the staff needs to play so pivotal a role with today's technology.

"We used to call it working smarter, not harder," he says. "Of course, you need to expand the EMS functional points to accommodate all the necessary programs, but there is no reason facility staff should be checking temperatures, making rounds, etc."

But most managers agree that the technology is not there yet. "Not having the right information being reported to the system could be nickel and diming the institution," Yennie says. For instance, parameters call for the dampers to be open 30 percent and allow 30 percent outside air. But the dampers may only be open 27 percent. "Often times, the only times they are right," he says, "is when they are fully open or completely closed. Othenwise, how do verify this? Someone has to check it."

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Facility check-ups

by Thomas A. Westerkamp

What shape is your building in? Here's a strategy to help managers maximize operational efficiency.

The daily challenges for engineering and maintenance managers are immense. They must upgrade systems and equipment to meet changing functional and cost objectives. They also must ensure compliance with ever-increasing regulatory requirements. Then, of course, they must keep the physical plant in top condition to meet operational requirements.

U.S. colleges and universities, for example, face a $28 billion backlog in critical repair needs and $87 billion in overall repair needs. A facility with 100 buildings with an average age of 50 years has more than $200 million in deferred maintenance costs.

These figures grow at an estimated rate of 6 percent per year, and the rate is increasing.

To answer the challenge of keep facilities in top conditions, managers need a strategic approach. They need a tool that will help monitor and analyze the condition of facilities in a way that generates data needed to develop and revamp management strategies.

That tool is facility condition assessment — the process of checking, recording and analyzing the condition of each system and piece of equipment that plays a role in facility operation. A sample assessment is provided below.

Such an assessment enables managers to go on the offensive against the physical depreciation that threatens to rob the physical plant of its ability to perform. Performed annually, a facility condition assessment reveals opportunities for improving the level of maintenance before deficiencies become unmanageable, and it enables managers to address essential managerial tasks more effectively.

Preparing a budget

The more active the role engineering and maintenance managers can take in budgeting, the more effectively they will be able to carry out their responsibilities. To be effective in that process, the manager must have all the facts.

A facility condition assessment provides a substantial amount of information that contributes to preparing a realistic physical plant budget.

Many managers complain that top facility management does not respect their budget requests and needs. Upper management, however, may not fully understand the consequences of their budget decision because they do not see the detrimental effects of deferred maintenance on a daily basis. The physical plant, however, will have to live with many problems of poor facility performance.

A major challenge facing maintenance and engineering managers is selling the physical plant budget to higher management, which usually has little technical background and only a sketchy appreciation of what it takes to maintain a facility.

The solution to this dilemma is for managers to use data collected from the condition assessment to demonstrate the consequences of not addressing the deferred maintenance. Managers will have to analyze each major budget category separately for this purpose and prioritize individual items.

Managers may not get all they ask for, but there is greater assurance that the funding will be there for the most mission-critical items.

Ensuring continuous improvement

No manager can simply make the same repairs on the same equipment over an extended period of time and survive in today’s competitive climate.

The secret of success is to use information from the facility condition assessment to address key management tasks, including:

- identifying better tools and more effective ways of using them
- redesigning repair methods
- identifying repetitive repairs
- correcting the causes to reduce the need for frequent repairs.

Managers who succeed in these efforts free up labor resources to work on another problem.

Condition assessments also can be the backbone of preventive maintenance efforts. Preventive maintenance would be better served if the name were to be changed to fit its mission today. The word preventive suggests stopping something bad from happening.

Today, preventive maintenance is evolving into continuous improvement. Many departments set a frequency to perform a repetitive task — such as checking the air compressor. If that's all departments do, however, they miss the point of preventive maintenance. Every time that task is performed, managers should look for opportunities to improve the method. Managers should consider whether to combine this with another task in the same area to minimize trips and reduce travel time, or whether improved compressor controls are available. This approach frees labor hours that can be used elsewhere, maybe to meet a new regulatory requirement.

Departments that use improved methods on just 20 percent of the tasks each year can completely redesign their maintenance processes every five years. If you think that's too aggressive, remember that most desk top and network computer systems have about a two-year life today.

Assessing current productivity

Facility condition assessments also provide managers with data and insights into other essential management issues, such as worker productivity. The condition of buildings, after all, is inextricably linked in part to the ability of crews to perform the work. Consider these productivity factors:

- What is the department's utilization — time spent on productive work?
- What is the performance —pace while working?
- What is the method level — the method used compared to good industry practice?
- What percent of the work is specific assignments on written work orders? These are a few of the statistics that can result from a productivity review.

On a scale of 0-100 percent, a grade of 80 percent is good. But if you combine 80 percent utilization, 80 percent performance and 80 percent method level, you get overall productivity of 51 percent — or about one hour's work for every two hours paid. If you double the current average base rate, you find that that is very expensive labor. Most businesses' hidden resources can be revealed by such analysis.

Information from the productivity assessment can be converted into productivity improvement potential very readily. Using the example above, increasing productivity from 5 1 percent to 80 percent for a staff of 25 would get the work done by 16 people, freeing nine people for other assignments.

Developing an improvement plan

A specific improvement plan can be developed using information from the condition assessment. Three key areas can usually yield improvement:

- more formal planning
- a performance measure
- better material control to hold the line on material costs while at the same time improving availability of critical spares and other materials.

Cost-justifying the investments

By comparing the cost of improving processes to savings from improvements, managers can moni-

tor the affect of a continuous improvement program. Let's say that upgrading the planning function, adding standards and improving the computer system costs $250,000.

Compare that to the savings in labor — nine people in the above example, at $30,000 in wages and benefits, or $270,000. That is a payback of less than one year. Also, most of the costs are one-time, while the savings repeat every year.

Maintaining management support

Conducting a facility condition assessment would be a fruitless task without proper follow-through. Perhaps the most important part of the follow-through is planning the presentation of the assessment's results to management responsible for financial decisions.

To get and keep management attention and support, managers need to develop a well-documented, concise report with an executive summary at the front and a detailed backup at the end.

The physical plant compete with all other financial demands of an organization. So while functional results are important to those with operating responsibility, financial results are the highest priority for top management. Both groups usually are represented when you make the presentation, so have something in the package for everyone. This will improve your chances of success.

Presenting a clear picture

If top facility management doesn't have time to tour the buildings discussed in the condition assessment, make a short video clip featuring footage of problem areas cracked roofs, ceiling water stains, warped floors, unsafe conditions, non-compliance with regulations, leaky foundations and exterior weather damage. This will provide graphic illustrations of how the budget will be spent. Also, before-and-after sequences showing results will help keep management support.

There are many other gains in management control that can result from a facility management assessment:

- less down time
- fewer emergencies
- lower life-cycle costs for assets
- better understanding of the effects of changing demand
- better understanding off time's effects
- better service to facility occupants
- better cooperation between maintenance and operations
- more stable maintenance workload and improved work conditions
- better trained maintenance work force
- better scheduling

more accurate reporting and equipment history information.

Departments that can realize some benefits from facility condition assessments also are likely to find greater staff morale, enhanced department image and, most importantly, an improvement in the condition and operation of facilities.

Sample Facility Condition Assessment

Facility condition assessments can be divided into two major areas: the physical plant, such as buildings, equipment, roads and grounds; and management control processes, such as policy, work orders, equipment history, materials control, preventive maintenance, performance management, audit procedures and computerized maintenance management systems.

Physical plant assessment

The following are areas to consider monitoring on the physical plant side of the facility condition assessment, divided into two classes: buildings, roads and grounds; and equipment:

Buildings, roads and grounds

- Foundations
- Floors
- Interior and exterior walls
- Doors, windows, vents and louvers
- Road surfaces, walks, parking lots, drains, guards and signage
- Roofs
- Grounds, lawns, trees, border plantings and

pest control

- Applicable regulatory requirements relating to EPA, OSHA, ADA, IAQ and asbestos abatement, among others

Equipment

- Electrical distribution systems and switchgear
- Lighting systems
- Heating distribution systems
- Boilers
- Energy management systems
- Water distribution systems
- Water and waste treatment systems
- Air systems
- Air compressors
- Chillers
- Air conditioners
- Pumps
- Motors
- Actuators
- Programmable logic controllers
- Personal computers and related hardware and soft ware
- Air handling systems, supply and exhaust fans and equipment
- Energy management systems
- Shops, tools and equipment
- Furniture and fixtures
- Lab equipment
- Office equipment
- Applicable regulatory requirements relating to EPA

OSHA, ADA IAQ and asbestos abatement, among others

Management control processes

- Management control policy
- Policy and procedures manual
- Organization
- Training
- Work order system
- Equipment history system
- Materials management system
- Preventive/Predictive maintenance system
- Performance management and control system
- Computerized maintenance management systems.

This article was written by Thomas A. Westerkamp, a maintenance management consultant and author of Maintenance Manager's Standard Manual, 2nd edition.

Kenken Puzzle Answer

2÷ 2	4	6+ 5	1	5− 6	6× 3
2− 4	5+ 3	11+ 6	5	1	2
6	2	5+ 4	10+ 3	5	1 1
3÷ 3	5 5	1	2÷ 4	2	11+ 6
1	5− 6	1− 3	2	4 4	5
5 5	1	2	72× 6	3	4

TEST YOUR OPERATOR IQ ANSWERS

Answers: 1) e 2) e 3) c 4) d 5) c

General Meeting Minutes

Chaired by:	Minutes by:	Call to order:	Webinar: January 12, 2021
Mark Arton	Monika Bhandari	5:01pm	

- **Introduction from Mark Arton**
- **Guest Speaker:** Damir Ivancic –Cleanslate Sanitary Supplies Inc.,
  Adon Rigg - Rochester Midland Corp. &
  Gregg Shoemaker of Kleer Northern

Topic of Presentation:

Building Cleaning: Best Practices during the Covid-19 Pandemic

New Business:

- BOA Tradeshow postponed until May 2022
- More webinars to be presented—share your ideas with BOA Executive
- Any outstanding membership dues can be paid online at the www.boacalgary.com website
- Visit the website for YouTube videos of last meetings
- Next virtual (zoom) meeting on February 9, 2021, 5PM

JOIN US ON TUESDAY FEBRUARY 9, 2021 AT 5PM FOR OUR VIRTUAL MONTHLY MEETING

Webinar Presentation Topic:
Alternative Waste Management Technology to Produce Biomass Energy

A local company, Eco-Growth Environmental, utilizes an innovative process to turn organic and cardboard/paper waste into a biomass feedstock, thereby diverting this type of waste from traditional waste landfills. This presentation will provide an example of how biomass waste conversion process can be used to provide an alternative fuel source and utilized by Executive Mat to produce the environmentally responsible energy required to support their cleaning process.

The guest speaker for this presentation will be Glen Smith, VP of Eco-Growth Environmental. The guest panellists will be Kim Caron, President of Executive Mat Group of Companies and Mike Thompson, CleanPower Worldwide.

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