Firestopping & Effective Compartmentation DIIMs
IM des coupe-feu et de la compartimentation efficace

Efficiency is the New Fuel
L'efficacité énergétique, une nouvelle source de combustible !

Causes et prévention de la corrosion sur la face interne du revêtement métallique de l'isolation des systèmes mécaniques: Partie 2
Commercial • Institutional • Multi-purpose • Industrial • Marine

The members of the British Columbia Insulation Contractors Association, mechanical insulation experts, have led the industry for over five decades. Quality Standards for Mechanical Insulation Manual, published by BCICA, is the reference manual of choice for conscientious members of the design community uncompromised in their pursuit of energy conservation. BCICA is proud to introduce a new proprietary Quality Assurance Certificate program, designed to provide mechanical systems specialists with confidence that energy savings and investment potential are not undermined by value engineering.

BCICA contractor members – experts at “saving energy for the future”

ADVANTAGE THERMAL
Port Coquitlam, BC
604 945 8190
advantagethermal@telus.net

B.C. THERMAL APPLICATORS LTD.
Nanaimo, BC
250 758 9712
bcthermal@shaw.ca

C & G INSULATION LTD.
Kelowna, BC
250 769 3303
candginsulation@shawbiz.ca

CARMIKE INSULATION
North Vancouver, BC
604 988 4211
wjaeggle@shaw.ca

COLUMBIA THERMAL SERVICES
Langley, BC
604 534 6894
columbiathermal@telus.net

COQUITLAM INSULATION LTD.
Sechelt, BC
604 740 0086
coquitlaminulation@dccnet.com

INDIAN HEAD CONTRACTING LTD.
White Rock, BC
604 290 5407
ihcontracting@yahoo.ca

NEW CENTRAL MECHANICAL INSULATION LTD.
Langley, BC
604 514 8450
ron@newcmi.ca
gary@newcmi.ca

PACIFIC RIM INDUSTRIAL INSULATION LTD.
Surrey, BC
604 533 8179
paul.smith@pac-rim.ca

REMCO INSULATION LTD.
Prince George, BC
250 562 5455
randyremco@shaw.ca

TIGHT 5 CONTRACTING LTD.
Burnaby, BC
604 874 9615
brad@tight5.net
www.tight5.net

WESTCOR SERVICES LIMITED
Coquitlam, BC
604 519 6789
jodonnell@westcorservices.com
bgibb@westcorservices.com

WEST COAST INDUSTRIAL INSULATION
Victoria, BC
250 384 4621
wcii@shaw.ca

Protect your investment.
Invest in energy conservation.

www.bcica.org info@bcica.org brian.bcica@telus.net
Firestopping & Effective Compartmentation DIIMs: Now… and the Future

The Effective Compartmentation industry has been working to improve the installed reliability of fire-rated building components.

DIIM des coupe-feu et de la compartimentation efficace
Aujourd’hui et demain

Le secteur de la compartimentation efficace travaille à améliorer la fiabilité de l’ensemble des éléments de construction cotés résistants au feu une fois qu’ils ont été installés.

Efficiency is the New Fuel

International Energy Agency has named the world’s cleanest, most important fuel source, and it isn’t what you expect.

L’efficacité énergétique, une nouvelle source de combustible !

L’Agence internationale de l’énergie a désigné la source d’énergie la plus propre et la plus importante de la planète, et ce n’est pas ce à quoi on s’attendrait.


Causes et prévention de la corrosion sur la face interne du revêtement métallique de l’isolation des systèmes mécaniques: Partie 2

Extras / Les extras

04 Editorial Comment / Éditorial
08 What’s Going On? / Où en sommes-nous ?
12 TIAC Conference / Le 52e congrès annuel de l’ACIT
41 News / Nouvelles
42 TIAC Distributors / Distributeurs de l’ACIT
44 It’s the Law / C’est la loi
46 Advertiser Index / Index des annonceurs
EDITORIAL COMMENT

This will be the last issue of the TIAC Times that goes to press before we meet at the 52nd Annual TIAC Conference in Victoria, from September 13-16, 2014. Chris Ishkanian and his team are hard at work and have wonderful things planned for us all in September.

I am excited to see that all the hard work that the board of directors and committees have been doing for our industry is coming together. When I open up specifications in the Thunder Bay area, for example, I am thrilled to see TIAC written all over it. This shows me we are getting the specifications out to our engineers, contractors, architects, governments, provincial associations, manufactures, and distributors. As a whole, the people in our industry need to continue to talk and show how the insulation industry does put savings back in the clients’ pockets.

We all understand the needs of the insulation industry and together, we must continue constant communication with all the parties above in order to maintain this positive momentum.

You have in hand the last issue of TIAC Times to be published before we meet at the 52nd Annual TIAC Conference in Victoria, from September 13-16, 2014. Chris Ishkanian and his team are hard at work and have wonderful things planned for us all in September.

I am pleased to see that all the hard work that the board of directors and committees have been doing for our industry is coming together. When I check specifications in the Thunder Bay area, for example, I am thrilled to see TIAC written all over it. This shows me we are getting the specifications out to our engineers, contractors, architects, governments, provincial associations, manufactures, and distributors. As a whole, the people in our industry need to continue to talk and show how the insulation industry does put savings back in the clients’ pockets.

We all understand the needs of the insulation industry and together, we must continue constant communication with all the above parties in order to maintain this positive momentum.
It’s Cold Tough.

Best In Class Performance Advantages With Fasson® Mechanical Insulation Tapes
- Excellent cold temperature performance down to 0°F
- High tack and adhesion
- Consistent 3 inch width, roll-by-roll quality
- One pass bonding cuts rework
- Environmental friendly liner
- All-around, use for hot or cold applications
- UL/ULC classified

Fasson® Mechanical Insulation Tapes are designed for pipe insulation and duct wrap applications used in commercial and industrial building construction.

Same-Day/ Next-Day Service.
Contribute to LEED® (Leadership in Energy and Environmental Design) points.

Phone: 800.321.1534
Email: hvacinfo@averydennison.com
www.tapes.averydennison.com

Proud Members Of:

© 2014 Avery Dennison Corporation, All Rights Reserved.
It’s Cold Tough, is a trademark and service mark of Avery Dennison Corporation. Fasson® and Avery Dennison® are registered trademarks of Avery Dennison Corporation. All other Avery brands, product names and codes or service programs are trademarks of Avery Dennison Corporation.
TIAC’s mission is to represent and promote the membership as the national voice of the thermal insulation industry in Canada. The TIAC membership works to advance the thermal insulation industry through the development of national industry standards, information, and education.

**Our Objectives**

1. To continue to promote and advance the TIAC Best Practices Guide to the industry.

2. To further the interests of the members of the Corporation.

3. To educate members of the Corporation, permitting the highest possible development of professional skills with respect to insulation in all aspects and through this professional development to continue to merit the confidence of architects, engineers, owners, and/or their agents.

4. To obtain, disseminate, and exchange full and accurate information among the members regarding all matters pertinent to the advancement of the insulation industry and the improvement of conditions within the industry.

5. To advance, promote, and maintain harmony in all relations between employer and employee in the insulation industry through the practice of high standards of ethical, professional, scientific, and social behaviour.

6. Generally, to promote and encourage better public relations, specifically, to receive and adjust any and all complaints between different parties in a manner which will assure adherence to the highest possible standards of efficiency and service without pecuniary gain.

7. To promote the conservation of energy through the effective use of insulation.

8. To co-ordinate industry endeavours and represent the membership as the national voice of the insulation industry.

---


**Nos buts**

1. Poursuivre la promotion et l’avancement des normes d’isolation nationales de l’ACIT par le biais de l’industrie.

2. Assurer la progression et favoriser les intérêts des membres.

3. Éduquer les membres, en permettant le plus haut degré de développement des compétences professionnelles en ce qui a trait à l’isolation sous toutes ses formes, et par l’entremise de ce développement professionnel afin de continuer à s’attirer la confiance des architectes, des ingénieurs, des propriétaires et de leurs agents.


5. Améliorer, promouvoir et maintenir un régime harmonieux dans toutes les relations entre les employeurs et les employés au sein de l’industrie de l’isolation grâce à la pratique de standards élevés en matière de comportement éthique, professionnel, scientifique, et social.

6. De façon générale, promouvoir et encourager de meilleures relations publiques, plus particulièrement : recevoir et régler toute plainte entre les différentes parties de façon à assurer l’adhésion aux standards les plus élevés en termes d’efficacité et de services sans gains pécuniaires.


8. Coordonner les projets ou activités de l’industrie et représenter les membres sur un front uni, c’est-à-dire la voix nationale de l’industrie de l’isolation.
2013 – 2014

President – Walter Keating
1st Vice-President – John Trainor
2nd Vice-President – Bob Fellows
Treasurer – Chris Ishkanian
Past President – Gerald Hodder
Secretary – David Reburn
Chairman Manufacturers – Michel Robert
Alternate Manufacturers – Scott Bussiere
Chairman Distributors – Murray Wedhorn
Alternate Distributors – Luc Barriault
Chairman Contractors – Mark Trevors
Alternate Contractors – Robert Gray
Director at Large – Jim Flower
Director of British Columbia – Andre Pachon
Director of Alberta – Mark Trevors
Director of Saskatchewan – Shaun Ekert
Director of Manitoba – Robert Gray
Director of Ontario – Walter Keating
Director of Quebec – Rémi Demers
Director of Maritimes – Michael MacDonald

Advisors to the Board of Directors

Norm DePatie
Don Bell

Committees

TIAC Times – John Trainor
Technical – Denis Beaudin
Conference Chairman – David Reburn
INT Chairman – Bob Fellows
Conference 2014 Chair – Chris Ishkanian

Provincial Directors

Association d’Isolation du Québec – Linda Wilson
B.C. Insulation Contractors Association – Barbara Stafford
Master Insulators Association of Ontario – Caroline O’Keeffe
Manitoba Insulation Contractors Association – Robert Gray
Saskatchewan Insulation Contractors Association – Donald Bell
Thermal Insulation Association of Alberta – Erika Rauser

2013 – 2014

Président – Walter Keating
Premier vice-président – John Trainor
Deuxième vice-président – Bob Fellows
Trésorier – Chris Ishkanian
Président sortant – Gerald Hodder
Secrétaire – Dave Reburn
Directeur de mandat spécial – Jim Flower
Président de Fabricants – Michel Robert
Remplaçant de Fabricants – Scott Bussiere
Président de Distributeurs – Murray Wedhorn
Remplaçant de Distributeurs – Luc Barriault
Président d’Entrepreneurs – Mark Trevors
Remplaçant d’Entrepreneurs – Robert Gray
Directeur de la Colombie-Britannique – Andre Pachon
Directeur de l’Alberta – Mark Trevors
Directeur de la Saskatchewan – Shaun Ekert
Directeur du Manitoba – Robert Gray
Directeur de l’Ontario – Walter Keating
Directeur du Québec – Rémi Demers
Directeur des Maritimes – Micheal MacDonald

Conseillers du conseil d’administration

Norm DePatie
Don Bell

Comités

TIAC Times – John Trainor
Technique – Denis Beaudin
Président des Congrès – David Reburn
Président de l’INT – Bob Fellows
Président du Congrès 2014 – Chris Ishkanian

Directeur provincial

Association d’Isolation du Québec – Linda Wilson
B.C. Insulation Contractors Association – Barbara Stafford
Master Insulators Association of Ontario – Caroline O’Keeffe
Manitoba Insulation Contractors Association – Robert Gray
Saskatchewan Insulation Contractors Association – Donald Bell
Thermal Insulation Association of Alberta – Erika Rauser

If you would like more information about the association or would like to review a complete list of members, please visit <www.tiac.ca>.
by / Steve Clayman, Director of Energy Initiatives

**What did the Vikings Know?**

As it turns out, they knew a great deal, including the benefits of insulation. Back in about 1000 AD quite of few of them came for a visit to what is now Canada, and stayed a while. These adventurers actually settled in the area of what we call L’Anse aux Meadows, Newfoundland. The walls of the long houses they built were seven feet (two metres) thick. They picked a cold, windswept location for sure.

The Vikings understood that using wood, peat moss, air spaces, and sod would give them an environment safe from the elements. Peasants in Europe built sod homes, not so much because they understood insulation, but because sod was everywhere and free, and they were poor. The aristocrats of the time built huge stone castles that were cold, drafty, and damp. Why they didn’t take a look at what the Vikings did is anyone’s guess.

The aristocrats compensated for the cold, drafts, and dampness by building huge fireplaces and burning lots of wood. They also wore multiple layers of clothes and slept in beds with curtains all around. Their inefficient designs wasted huge amounts of energy. The solution to wasted energy was wasted resources and a high degree of discomfort, which leads me to the subject at hand: insufficient or no insulation on mechanical systems wastes energy.

We know that because we’re at least as smart as the Vikings, but how does this fact translate into real world examples? Consider these:

1) A major teaching hospital in a large Canadian city is air-conditioned by a series of chillers. The delivery of the cold water is through ¼ mile (1.2 km) of 12”, 10”, and 8” pipe. The return is the same length. The piping is in a tunnel beneath the hospital and some sections of the supply line are in close proximity to a steam line. Most of the supply and return lines were insulated about 40 years ago. Some lengths had no insulation, other areas had damaged insulation, and there was a section covered in asbestos insulation.

The problems occurred during hot, humid weather with the chillers running flat out and sometimes not able to keep up to the cooling demands in the operating rooms and elsewhere. The administration’s solution was to install another chiller (burn more wood and wear more clothes, as the castle-dwellers did to stay warm). There was excessive heat gain on the chiller lines (to say nothing of condensation issues). Wasted energy? By the truckload! Chillers were running beyond their operational efficiency. Install another chiller and we have more wasted energy in addition to a capital expenditure of several million dollars.

par / Steve Clayman, directeur des initiatives d’économie d'énergie

**Que savaient donc les Vikings ?**

Il s’avère qu’ils en savaient des choses, ces Vikings, et qu’ils connaissaient bien les avantages de l’isolation. Vers l’an 1000 de notre ère, bon nombre d’entre eux s’étaient déjà rendus dans ce territoire qu’on appelle maintenant le Canada et y ont séjourné pendant un certain temps. En fait, ces aventuriers se sont installés dans la région connue sous le nom de L’Anse aux Meadows (Terre-Neuve). Les murs de leurs maisons longues avaient une épaisseur de sept pieds (deux mètres). Il est vrai qu’ils avaient choisi une région froide et balayée par les vents.

Les Vikings comprenaient qu’avec du bois, de la mousse de tourbe, des lames d’air et des mottes de terre, ils pouvaient se créer un environnement à l’abri des éléments. Les paysans européens se construisaient bien des huttes de terre, mais c’était plutôt parce qu’ils étaient pauvres et que ce matériau était gratuit et abondant partout, que parce qu’ils comprenaient la notion d’isolation. Les aristocrates de l’époque, eux, érigaient de gigantesques châteaux de pierre qui étaient froids, humides et traversés de courants d’air. On s’explique mal d’ailleurs pourquoi ils n’ont pas repris à leur compte les techniques des Vikings.

Afin de lutter contre le froid, les courants d’air et l’humidité, les aristocrates construisaient d’immenses foyers et y faisaient brûler de grandes quantités de bois. En outre, ils portaient plusieurs couches de vêtements et dormaient dans des lits entourés de rideaux. Leurs installations mal conçues entraînaient des pertes considérables d’énergie, un gaspillage des ressources et un degré d’inconfort élevé, ce qui m’amène au sujet du présent article : le gaspillage d’énergie dû à des systèmes mécaniques peu ou pas isolés.

Nous avons beau savoir que des installations mal isolées entraînent des gaspillages d’énergie – étant au moins aussi intelligents que les Vikings –, mais qu’en est-il concrètement ? Considérons les exemples suivants :

1) Un centre hospitalier universitaire important situé dans une grande ville canadienne est climatisé à l’aide d’une série de refroidisseurs d’eau. L’eau froide est distribuée par un réseau de trois quarts de mille (1,2 km) de tuyaux de douze, dix et huit pouces de diamètre. La conduite de retour est de la même longueur. La tuyauterie se trouve dans un tunnel aménagé sous l’hôpital et quelques parties de la canalisation d’alimentation sont tout près d’une conduite de vapeur. La presque totalité de la tuyauterie d’aménée et de retour de l’eau a été isolée il y a environ 40 ans. Certaines sections étaient dépourvues d’isolant; à d’autres endroits, l’isolation était endommagée; enfin, une section était isolée avec de l’amiante.
WHAT IF YOU COULD PROVIDE BETTER

SAFETY
AT NO EXTRA COST?

- BOOST YOUR SAFETY RATING
- REDUCE COSTLY INJURY CLAIMS
- RETAIN SKILLED LABOUR
- ATTRACT MORE WORK
- IMPROVE PROJECT TIMELINES
- INCREASE PROFIT MARGINS

SafetyJacs™ are a new innovation in cut & roll jacketing, that are safer, quicker and easier to install... and all at no extra cost. It’s our new standard.

Let us help you become an even SAFER employer.

SCHEDULE A PRESENTATION TO LEARN HOW: 800.299.0819 CAN • 888.877.7685 USA • WWW.IDEALPRODUCTS.CA
An engineer determined if the temperature drop from the chiller plant to the end of the supply line could be reduced by 2 degrees F (1.1 degrees C), the existing chillers could run efficiently and there wouldn’t be a need for a new chiller. The water in the return line would be cooler than before and place a lower demand on the chillers.

The challenge for TIAC was to run the calculations and determine what type of insulation or combination of insulations would work to satisfy the 2 degrees F (1.1 degrees C) calculation result, keeping in mind the work was in a tunnel with piping running close together. We settled on a combination of polyiso and fibreglass pipe insulation with an estimated installed cost of $900,000.

2) A manufacturing plant was having a problem with a product that was thickening (cooling) too soon. The product was made in huge stainless steel vats kept at a very specific temperature. To offset the premature cooling of the product, the plant manager had the heat turned up on the vats, which of course created other problems, the least of which was a spike in energy costs.

The plant ran on very tight profit margins because it was producing large quantities of deodorant for several major retailers (I wondered what was in the vats, so I asked). Our recommendation was for 2” (50 mm) of fibreglass board covered with stainless steel jacketing, all fastened to the curved vats. The payback was seven months. The plant manager was happy and, I assume, so were the end users.

Does insulation save energy? That’s a given. Do the correct products, thicknesses, and application procedures reduce the wear and tear on mechanical systems? Yes, they do! Does this translate into energy savings in a very explicit way? Yes, indeed!

If we don’t know where these energy-wasting situations are, we certainly can’t act on them. Contractors who do maintenance work in any kind of facility are, I’m sure, brought face-to-face with deficiencies just screaming out for attention. Let’s talk about this potential business. Let’s develop the business cases to do the work, and save energy, lots of it.

The Vikings knew their stuff and so do we.

steve.clayman@tiac.ca • 416-606-1512

Do you have an interesting project on the go? Submit the details to our editor, Jessica Kirby, at jessica.kirby@pointonemedia.com or call 250.816.3671
L’usine avait des marges de profit très serrées parce qu’elle produisait de grandes quantités de désodorisant pour plusieurs gros détaillants (comme je me demandais ce que les cuves contenaient, j’ai posé la question). Nous avons recommandé à l’usine de fixer aux cuves arrondies un panneau en fibre de verre de deux pouces (50 mm) chemisé d’acier inoxydable. La période de récupération a été de sept mois. Le directeur de l’usine était satisfait et je suppose que les utilisateurs finaux l’étaient également.


Si nous ne sommes pas au courant de ces cas de gaspillage d’énergie, nous ne pouvons certes pas y remédier. Je suis convaincu que les entrepreneurs chargés des travaux d’entretien dans tout type d’installation constatent des lacunes qui ont un besoin criant d’être comblées. Discutons de ces possibilités d’affaires. Élaborons les analyses de rentabilité nécessaires et économisons de l’énergie, beaucoup d’énergie.

Les Vikings s’y connaissaient. Nous aussi, nous nous y connaissons !

Steve.Clayman@tiac.ca • 416-606-1512

DYPLAST

products

ISO-C1® ISO-HT™ DyTherm® Phenolic

We have the Experience & Knowledge to Service your Mechanical Insulation Needs

insulate today, preserve tomorrow

www.dyplast.com / 800.433.5551 / info@dyplast.com

www.tiactimes.com • Spring / Printemps 2014 • 11
I’d like to take this opportunity to invite everyone to attend TIAC’s 52nd annual conference in beautiful Victoria, B.C. This September 13-16. The conference will be held at the Delta Ocean Pointe Resort & Spa in downtown Victoria.

We have put together a program that will provide a balance of educational sessions and networking opportunities. The conference kicks off on Saturday night with the political satirist Todd Butler, followed by a fun casino night with donations being accepted for the Western Canadian Mesothelioma Society.

Sunday morning starts off with a presentation by Dr. Martin Collis, author and business coach, on workplace wellness. George Hedley will follow with a presentation on entrepreneurial excellence. After lunch, George Hedley will lead two contractor-specific coaching sessions: profit driven estimating and bidding strategies; and, how to improve and maximize field productivity. Meanwhile, manufacturers and distributors will have their breakout sessions.

That evening we’ll have a private dinner at the Royal BC Museum where we’ll have the opportunity to explore two of the exhibits and enjoy catered themed tasting stations throughout the exhibit area.

Monday morning will start with a presentation by Steve Clayman and NIA, followed by the CanAm meeting. The golf tournament will be played that afternoon at Olympic View Golf & Country Club.

Monday night is the open evening. Tuesday morning’s opening speaker is Amos Avitan who is a business coach and author. His presentation will be on attitude in the workplace. That session will be followed by the AGM then the luncheon, introducing the 2015 conference location. Tuesday evening concludes with the Manufacturer’s/Distributors reception followed by the President’s dinner.

It won’t be all business as we have the following activities organized for spouses:

Sunday - Spa sessions (max 21) - City bus tour (max 30)
Monday - Butchart Gardens visit followed by a lunch and wine tasting at Church & State Wines winery (max 35) - Whale watching (max 26) - Golf tournament

The organizing committee is excited to be hosting this conference and we look forward to seeing you in Victoria this September. Together we can make this a conference to remember. Safe travels.

by / Chris Ishkanian, Conference 2014 Chair


Nous avons prévu un programme qui allie séances de formation et occasions de réseautage. Le congrès s’ouvrira le samedi soir avec un spectacle de Todd Butler, artiste de la satire politique, suivi d’une soirée casino au cours de laquelle des dons seront recueillis pour la Western Canadian Mesothelioma Society (Société du mésothéliome de l’Ouest canadien).

Dimanche matin, nous entendrons d’abord l’exposé de M. Martin Collis, PhD., auteur et formateur en affaires, sur le bien-être au travail. George Hedley suivra avec un exposé sur l’excellence en entreprise. Après le déjeuner, George Hedley dirigera deux séances de coaching destinées aux entrepreneurs : stratégies pour des estimations et des soumissions axées sur la rentabilité et moyens d’améliorer la productivité sur le chantier. Pendant ce temps, les fabricants et les distributeurs assisteront aux ateliers qui leur sont destinés.

Ce soir-là, un dîner privé est prévu au Royal BC Museum. Ce sera l’occasion d’aller y explorer deux des expositions et de goûter des spécialités culinaires thématiques dispersées dans la salle d’exposition.

Lundi matin, Steve Clayman et la NIA présenteront leur communication, après quoi la réunion Can Am suivra. Le tournoi de golf aura lieu en après-midi au Olympic View Golf and Country Club.


On ne fera pas que parler affaires, car un programme a été prévu pour les conjointes ou conjoints :

Dimanche – Séance au spa (21 personnes au maximum) – Visite guidée de la ville en autocar (30 personnes au maximum)
Lundi – Visite des jardins Butchart suivie du déjeuner et d’une dégustation de vins au vignoble Church & State (35 personnes au maximum) – Observation de baleines (maximum 26 personnes) – Tournoi de golf

Le comité organisateur se réjouit d’accueillir les délégués du congrès à Victoria en septembre. Ensemble, nous en ferons un événement mémorable. Bon voyage en toute sécurité !
TIAC 52nd Annual Conference
September 13-16, 2014
Victoria, BC

Registrant’s Name: ____________________________
Company Name: ______________________________
Address: ______________________________________
Postal Code: ____________________________
Telephone: ________________________________
Fax: ______________________________________

Special Requirements (accessibility, dietary):

Membership Status: __________________
- TIAC/NIA Member
- Non-Member
- Honorary Life Member
- First Conference
- Contractor
- Manufacturer
- Other

Type of Company: __________________
- TIAC/NIA Member
- Contractor
- Non-Member
- Distributor
- Honorary Life Member
- Manufacturer
- First Conference

Registration Fees
Please check the appropriate boxes.
Registration fees include: (HST #R122874324)
- Presentations, Meetings, Saturday Night Welcome Reception, Sunday Dinner and Royal BC Museum, Cocktail Receptions, Delegates and Spouses Breakfasts, Tuesday Luncheon and the President’s Ball.
- Other Programs:
  - Spa Package $219
  - Butchart/Wine Tour $160
  - Golf $199
  - Whale watching $199
  - City Tour $60

Early Bird registration before July 31, 2014 will be entered into a draw for a free registration to the TIAC 2015 Conference in Charlottetown, PEI.

Please indicate your attendance:
- Yes, I/we will attend the Sunday Dinner - Royal BC Museum.
- Yes, I/we will attend the Tuesday Luncheon.
- Yes, I/we will attend the President’s Ball.

Optional Programs

Method of Payment
Payment must be received prior to the conference.
- Cheque enclosed – Make cheque payable to: TIAC 2014 Conference c/o The Willow Group
- Charge my: American Express MasterCard Visa

Card Number: __________________ Expiry Date: __________________

Cardholder Name: __________________ Signature: __________________

AN INVOICE AND CONFIRMATION OF REGISTRATION WILL BE ISSUED.

Accommodation
Delta Victoria, Ocean Pointe Resort and Spa
45 Songhees Road, Victoria, BC V9A 6T3 -- 1-800-667-4677

Special Conference Rate:
Delegates are asked to call 1-800-667-4677 to review the variety of room options available at special TIAC discounted rates for our delegates. Be sure to quote “TIAC” discount code to obtain reduced rates. Please call prior to August 12, 2014 in order to qualify for the group rate.

By staying at the conference hotel, you are contributing to the financial health of the Thermal Insulation Association of Canada. We appreciate your support!

For more information or to register for the Conference by mail, fax or on-line...
Thermal Insulation Association of Canada
1485 Laperriere Avenue, Ottawa, ON Canada K1Z 7S8
Tel: 613.724.4834/1.866.278.0002 | Fax: 613.729.6206
Email: tiac@thewillowgroup.com | Web: www.tiac.ca
52e Congrès annuel de l’ACIT
13 au 16 septembre 2014
Victoria (BC)

Nom du participant :
Nom de l’entreprise :
Adresse :
Tél. :
Téléc. :
Courriel :

Besoins spéciaux (accessibilité, alimentation) :

Statut de membre :
❑ Membre de l’ACIT/NIA
❑ Non-membre
❑ Membre honoraire à vie
❑ Premier Congrès
❑ Entrepreneur
❑ Distributeur
❑ Fabricant
❑ Autre

Frais d’inscription

Veuillez cocher les cases appropriées.

Activités comprises dans les frais d’inscription :
Exposés, réunions, réception d’accueil le samedi soir, dîner et sortie en ville le dimanche, cocktails, petits déjeuners des délégués et de leurs conjoints, déjeuner le mardi et bal du président.

Tarifs – Membres
❑ Individuel
❑ Individuel (résident des ÉU)
❑ Avec conjoint(e)
❑ Avec conjoint(e) (résident des ÉU)
❑ Famille (19 et plus)
❑ Famille (19 ans et moins)
❑ Enfant (19 ans et moins)
❑ Life Member

Tarifs – Non-membres
❑ Individuel
❑ Individuel (résident des ÉU)
❑ Avec conjoint(e)
❑ Avec conjoint(e) (résident des ÉU)
❑ Famille (19 et plus)
❑ Famille (19 ans et moins)
❑ Enfant (19 ans et moins)

Les participants qui s’inscrivent avant le 3 juillet 2014 seront admissibles au tirage d’une inscription gratuite au Congrès de l’ACIT 2015, organisé à Charlottetown (PEI).

Veuillez indiquer votre présence aux activités suivantes :

❑ Oui, nous participerons au souper et à la soirée en ville le dimanche
❑ Oui, nous participerons au déjeuner du mardi
❑ Oui, nous participerons au bal du président
❑ Non, nous ne participerons pas au souper et à la soirée en ville le dimanche
❑ Non, nous ne participerons pas au déjeuner du mardi
❑ Non, nous ne participerons pas au bal du président

Programme Optionelle:
❑ Forfait spa
❑ Le Butchart/Dégustation de vin
❑ Le golf
❑ Safari visuel aux baleines
❑ Tour de ville

Total TVH 13 % =
TOTAL =

Mode de paiement

Le paiement doit être reçu avant le Congrès
❑ Chèque joint – Rédigez le chèque à l’ordre de :
❑ Débitez ma carte
❑ American Express
❑ MasterCard
❑ VISA

Numéro de carte :
Date d’expiration :
Nom du détenteur :
Signature :

NOUS ÉMETTRONS UNE FACTURE ET UNE CONFIRMATION D’INSCRIPTION.

Remarque : politique de remboursement et d’annulation
Les demandes de remboursement ou d’annulation doivent être effectuées par écrit. Nous les traiterons de la manière suivante :
• au plus tard le 14 juillet 2014 : remboursement complet;
• après le 14 juillet 2014 et avant le 2 août 2014 : remboursement à 50 %;
• A compter du 2 août 2014, après cette date et absence du Congrès : aucun remboursement.

Hébergement

Delta Victoria, Ocean Pointe Resort and Spa
45 Songhees Road, Victoria, BC V9A 6T3 -- 1-800-667-4677

Tarif Réduit:

Pour obtenir de plus amples renseignements sur le Congrès ou pour vous y inscrire par courrier, par télécopieur ou en ligne...

Association canadienne de l’isolation thermique
1485, avenue Laperrière, Ottawa, ON Canada K1Z 7S8
Tél. : 613.724.4834 / 1.866.278.0002
Téléc. : 613.729.620
Courriel : tiac@thewillowgroup.com | Web: www.tiac.ca
You Can Count on JM Micro-Lok® HP Pipe Insulation for Every Project.

Johns Manville Micro-Lok HP Fiber Glass Pipe Insulation delivers consistent performance during fabrication and installation, saving you both time and money. The high-quality fiber glass core, industry-proven jacket performance and excellent installed appearance of Micro-Lok HP show time and time again that everyone at Johns Manville is committed to a core principle: materials matter.

Learn more about Micro-Lok HP and other innovative JM building product solutions at specJM.com.
Fire resistance rated construction in buildings contains many components. Fire resistance rated walls and floors start the big box that creates Effective Compartmentation. The features of fire and smoke protection that provide continuity to the fire-rated wall and floor assemblies include installed firestop systems, fire and smoke dampers, fire rated glazing, and both rolling and swinging doors and hardware. These tested and listed systems provide fire resistance continuity and smoke resistant properties, as well.

The Effective Compartmentation industry has been working to improve on the installed product reliability from many perspectives. Each industry has been working to build better systems, focusing on the proper Design, Installation, Inspection, and Maintenance (DIIM) of each Effective Compartmentation continuity component. This is the future of firestopping and Effective Compartmentation.

The first component is the D-Design, where tested and listed systems are designed by manufacturers who submit products for testing at labs such as Underwriters Laboratories, LLC (UL), Underwriters Laboratories of Canada (ULC), FM Approvals (FM), Intertek, and others. The tested and listed systems provide the “suitability for use statements” for the fire resistance and smoke resistant products that become systems when used in specific applications. Testing continues to provide more competitive and better systems, designed by manufacturers of all types of Effective Compartmentation products.
Effective Compartmentation: The Rest of the Story
The ‘IIM’ in ‘DIIM’
The big differences are in the rest of the story. Testing provides suitability for use of products in specific applications. However, how do the products get handled once they leave the factory or manufacturer/distributor warehouse? That’s where the rest of the story starts… the ‘IIM’ of the DIIM. IIM means the Installation, Inspection, and Maintenance of these fire resistance rated and smoke-resistant assemblies and their fire and smoke protection features.

Study of the Effective Compartmentation industries found the following activities to address the IIM part of DIIM by the firestopping, fire and smoke damper, fire rated glazing, rolling fire door and swinging fire door, and hardware industries:

Firestop Systems
I-Installation
In North America, the Middle East, the Caribbean, and South America, this industry has focused on the I-Installation part of IIM of firestopping through focus on the company and the workforce. Third party contractor company management system audits by laboratories like FM Approvals and UL, plus firestop / containment worker apprenticeship education for the workforce, builds quality and reliability of the installed systems.

The Firestop Contractors International Association (FCIA) collaborated with FM Approvals to build FM 4991, Standard for the Approval of Firestop Contractors and with UL for the UL/ULC Qualified Firestop Contractor Program. Both the FM 4991 and UL Qualified Firestop Contractor Programs provide general contractors, building owners and managers, fire marshals, and building code officials a way to quantifiably qualify contractor companies. The FM 4991 and UL Qualified Firestop Contractor Programs differentiate installing contractors who have invested in their company’s understanding of the zero tolerance quality installation process for firestopping.

FM 4991 or UL/ULC Qualified Firestop Contractors become approved or qualified after a company and on-site audit of their management system takes place. A person who has passed a rigorous FM or UL/ULC firestop industry exam based on FCIA’s Firestop Manual of Practice and firestop systems selection is named the Designated Responsible Individual (DRI). They become a DRI only after the firm becomes FM 4991 Approved or UL/ULC Qualified. Education for those taking the FM or UL Firestop Exam is offered at FCIA conferences, symposiums, and more. For the workforce, look for an announcement in the fall about FCIA’s new Firestop Containment Worker Program.

I-Inspection
For the second ‘I’, Inspection, the 2012 International Building Inspection Containment Worker Program.

For an announcement in the fall about FCIA’s new Firestop conferences, symposiums, and more. For the workforce, look those taking the FM or UL Firestop Exam is offered at FCIA (DRI). They become a DRI only after the firm becomes selection is named the Designated Responsible Individual FCIA’s Firestop Manual of Practice and firestop systems. A person who has passed approved or qualified after a company and on-site audit of their management system takes place. A person who has passed a rigorous FM or UL/ULC firestop industry exam based on FCIA’s Firestop Manual of Practice and firestop systems integration of firestopping through focus on the company and...
Firestopping & Effective Compartmentation DIIMs

Code now has a requirement for third party inspection of firestop installations to ASTM E 2174 and ASTM E 2393 Standards for the Inspection of Installed Penetration (2174) and Fire Resistive Joint (2393) Firestops.

Buildings included are those structures 75’ and higher above fire department access and critical occupancies found in IBC’s table 1604.5. Buildings such as education, assembly, and other occupancies may be subject to these inspections.

There is also a program that qualifies the special inspection agency to perform these inspections. The International Accreditation Services, (iAS), a subsidiary of the International Code Council, (ICC) has an Accreditation Criteria, AC-291 for Special Inspection Agencies. In iAS AC 291, there are requirements for accrediting those inspection companies that specialize in firestop special inspection.

FCIA was the code proponent that petitioned to include ASTM E 2174 & ASTM E 2393 in Codes. FCIA collaborated with manufacturers and consultants in the industry to create the ASTM E 2174 & ASTM E 2393 Standards. Canada is the next stop for this as well.

**M-Maintenance**

Firestopping is included in the fire resistance rated system maintenance section in the International Fire Code 703.1 and NFPA 101, plus in the National Fire Code of Canada. In the

---

**Providing custom-designed removable insulation covers to the Western Canada oil and gas market**

- Protects employees from hot piping with reduced outer cover temperatures
- Protects upstream equipment from external environmental conditions
- Provides years of service with durable materials and easy installation and removal
- Available with fastening systems to suit particular applications
- Reduces insulation waste and eliminates the higher cost of hard insulation removal and re-application

---


La FCIA est l’organisme qui a proposé d’inclure les normes ASTM E2174 et ASTM E2393 dans les codes. La FCIA a travaillé de concert avec fabricants et experts-conseils du domaine pour mettre au point les normes ASTM E2174 et ASTM E2393. Le Canada sera vraisemblablement invité sous peu à adopter les mêmes normes.

**M – Maintien et entretien**

Les ensembles coupe-feu sont cités dans la section 703.1 sur le maintien de la cote des ensembles classés résistants au feu du Code international de lutte contre l’incendie, dans la norme NFPA 101 et dans le Code national de prévention des incendies du Canada. Dans le Code international de lutte contre l’incendie, une disposition prévoit que le propriétaire d’immeuble fasse une inspection annuelle, ainsi :
Isn’t it nice when people really listen to what you need, then deliver? Owens Corning does. We’re continually looking for ways to take our insulation to the next level and provide the solutions you’re looking for.

By investing in new state-of-the-art equipment, we’re able to produce insulation with increased firmness, for easy installation and a clean finished appearance. Our recent changes also make it easier to filet, resulting in quicker installation — even around irregular fittings. And when you use our SSL II® Positive Closure System, it stays secure — exactly how it should be.

Perfecting. Refining. Enhancing. When it comes to providing a higher caliber of insulation that meets your satisfaction — and your customers’ — we’re on the job.

Learn how our refinements can help your business at www.owenscorningpipe.com or call 1-800-GET-PINK®.
International Fire Code, there is a requirement for annual inspection by the building owner. Here is the Maintenance passage, bolded for convenience:

SECTION 703
FIRE-RESISTANCE-RATED CONSTRUCTION

703.1 Maintenance. The required fire-resistance rating of fire-resistance-rated construction (including walls, firestops, shaft enclosures, partitions, smoke barriers, floors, fire-resistive coatings and sprayed fire-resistant materials applied to structural members and fire-resistant joint systems) shall be maintained. *Such elements shall be visually inspected by the owner annually and properly repaired, restored or replaced when damaged, altered, breached or penetrated.* Where concealed, such elements shall not be required to be visually inspected by the owner unless the concealed space is accessible by the removal or movement of a panel, access door, ceiling tile or similar movable entry to the space. Openings made therein for the passage of pipes, electrical conduit, wires, ducts, air transfer openings and holes made for any reason shall be protected with approved methods capable of resisting the passage of smoke and fire. Openings through fire-resistance-rated assemblies shall be protected by self- or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly.**

Firestopping as a System
Throughout North America and internationally, firestopping is a systems oriented installation. The product alone does not get a rating. Products must be installed to the tested and listed system from a nationally recognized testing laboratory before they become a fire and life safety tested and listed firestop system.

It takes a firestop specialty contractor to understand all the details involved to get this done right so it works. It also takes a firestop specialty contractor to understand how to supervise the workforce so they don’t ‘get creative’ in the field and vary from the tested and listed systems. Then, a special inspection agency that focuses on firestopping is needed to know if a tested and listed system is installed properly.

Once the tested and listed firestop system is installed and building turned over to the building owner and/or manager, the tested and listed systems can be managed or maintained for the life of the building.

Sounds easy? Try it in real life! That’s why the specialty firestop contractor can be a great service to the building owner and manager. After the building is constructed, new pipe and cables are placed to serve building occupants. These make holes in the walls and floors that need to be treated to keep the continuity in place for fire and smoke resistance.

SECTION 703
ÉLÉMENTS DE CONSTRUCTION COTÉS RÉSISTANTS AU FEU

703.1 Maintien et entretien – Il faut maintenir la cote de résistance au feu exigée de tout élément de construction coté résistant au feu : murs, coupe-feu, puits, cloisons, coupe-fumée, planchers, revêtements et produits vaporisés appliqués à des membres de la structure et joints. Ces éléments de construction doivent faire l’objet d’une inspection visuelle annuelle de la part du propriétaire et être réparés, restaurés ou remplacés de façon appropriée s’ils se trouvent endommagés, altérés, détériorés ou perforés. Si les éléments en question sont dissimulés, il n’est pas nécessaire que le propriétaire en fasse l’inspection visuelle à moins qu’il soit possible de les voir en retirant ou en déplaçant un panneau, une porte d’accès, une tuile de plafond ou tout autre objet amovible du même genre. Les ouvertures pratiquées pour le passage des tuyaux, des câbles électriques, des fils, des canalisations, les ouvertures pour la circulation d’air et les trous, peu importe leur fin, doivent être protégées par des dispositifs appropriés capables de résister au passage du feu et de la fumée. Les ouvertures pratiquées dans des ensembles cotés résistants au feu doivent être protégées par des trappes, volets ou clapets autorabattables ou à fermeture automatique homologués et conformes aux exigences en matière de protection contre les incendies. [Traduction libre]**

Les coupe-feu : un ensemble
En Amérique du Nord, comme partout ailleurs dans le monde,
40 YEARS OF PERFORMANCE

BIG 3 AUTOMOTIVE
40 Years of RG in brake cables with no reported failure.

UNITED STATES NAVY
24 Years of RG protecting deck side elevator cables, watertight door dogs, detachable anchor links with never a reported failure on a Navy vessel.

OIL WELL CASING CORROSION REPAIRS
10 Years ago major oil companies asked us to solve their down-hole casing corrosion. As of last discussions this year, it has cured a $20+ million dollar issue for a fraction of that.

OIL/GAS/CHEMICAL/POWER INDUSTRIES
15 Years correcting corrosion issues for major oil and chemical companies, hydro-electric, electrical transmission poles, and many other industries across the U.S. and Canada. No corrosion under the gel has ever been reported.

FROZEN FOOD/REFRIGERATED WAREHOUSES
12 Years of RG protecting piping systems at 70% of the top 100 food processing companies in the US. and Canada. Never had an RG failure on a cold system; 8 year inspections at one facility showed that the pipe looked as new as the day they installed it!

REACTIVEGEL® IS A PROVEN TECHNOLOGY

Why would you choose any unproven product?

To learn more, visit www.ReactiveGel.com/maf

Innovation based. Employee owned. Expect more.

Polyguard®

Phone: (1) 214.515.5000 www.PolyguardProducts.com
Specialty firestop contractors understand how to maintain continuity of fire resistance. They also know what needs to be done to keep the rest of the fire resistance and smoke resistant system effective including fire-rated doors and dampers. Rely on the specialty firestop contractor. They understand more than just firestop systems.

Want to get Involved?
The Firestop Contractors International Association has been involved in the development of better reliability of firestopping installations by building:

Body of Knowledge – the FCIA Firestop Manual of Practice is the study guide for FM & UL Firestop Exams. It’s also where the firestop industry knowledge rests.

Reliability of Firestopping – FCIA’s Committees worked with FM Approvals, UL, ASTM, IAS, and at ICC, NFPA to build and implement the DIIM for firestopping. Join the association to get involved.

Educate – at FCIA Conferences, meet industry leaders in firestopping and Effective Compartmentation.

**Excerpted from the 2012 International Fire Code, copyright, the International Code Council.

Bill McHugh is executive director of the Firestop Contractors International Association (FCIA), based in Hillside, IL. He can be reached at bill@fcia.org.

---

Eliminate job failure and repair to cut and keep project costs competitive
No fumes – no operational interruptions in odor-sensitive environments
Food processing areas
Flammable areas
Perfect for low VOC installations – lower costs, fast and easy
Install faster in any environment – even in cold weather

More jobs won, more jobs done, more jobs billed.

Get your FREE SAMPLE of Cel-Link II™

Just visit www.aeroflexusa.com/cel-link2 TODAY!

Contact Aeroflex today: 1-866-237-6235 (1-866-AEROCEL) | www.aeroflexusa.com

The NEW Revolutionary
Fast and Easy Way to Seal Butt Seams on Elastomeric Insulation

Cel-Link II™ with SSPT

Done once. Done fast. Done right.
Contact Aeroflex today at 1-866-237-6235 (1-866-AEROCEL) Or visit our web site: www.aeroflexusa.com

IN STOCK - IMMEDIATE DELIVERY
WITH AEROFLEX® SELECT DISTRIBUTION: 1-866-237-6235

AEROCHEL® STAY-SEAL® WITH PROTAPE (SSPT)

Insist on Stay-Seal® with Protape® (SSPT). The one and only Stay-Seal® closure that’s time tested and proven! It’s the best closure system in the world because of self-sealing dual-direction adhesive. Avoid call-backs or failures.

SSPT MAINTAINS ITS SEAL IN HARSH CONDITIONS.

- EPDM-based self-adhesive closure.
- Specially made for adhering the seams of AEROCHEL® tubes.
- Provides extra holding strength to the seams.
- Prevents atmospheric moisture from penetrating the seams.

IT WORKS!

Contact Aeroflex today at 1-866-237-6235 (1-866-AEROCEL) Or visit our web site: www.aeroflexusa.com


Bill McHugh est directeur général de la Firestop Contractors International Association (FCIA) dont les bureaux sont situés à Hillside en Illinois. Vous pouvez communiquer avec lui par courriel à l’adresse bill@fcia.org.

Vous souhaitez vous impliquer ?
La Firestop Contractors International Association s’occupe d’améliorer la fiabilité des ensembles coupe-feu par les moyens suivants :


Formation – Aux conférences de la FCIA, venez rencontrer des chefs de file du domaine des coupe-feu et de la compartimentation efficace.
A new report from the International Energy Agency (IEA) has named the world’s cleanest, most important fuel source, and it isn’t what you expect.

According to IEA’s “Energy Efficiency Market Report,” the worlds stands the most to gain investing in energy efficiency as a “fuel” source, because potential savings eclipse the amount of energy generated by other fuel sources. Energy efficiency accounted for 63 exajoules (EJ) of avoided energy use in 2010, exceeding the amount of oil (43 EJ), electricity (22 EJ), and natural gas (22 EJ) used in the same period.

Besides being an essential component in the race to reduce fossil fuel use and GHG emissions, energy efficiency spans technology, global infrastructure, and geographical boundaries. In other words, it is a truly universal fuel source, and the world is taking notice.

“The scale of recent investment in energy efficiency worldwide makes it as significant in its contribution to energy demand as investment in renewable energy or fossil fuel generation,” said the report. In 2001, energy efficiency measures and initiatives garnered $300 billion in investment, placing it on a level playing field with global investment in fossil fuel power generation and renewable energy.
IEA’s executive director Maria van der Hoeven said energy efficiency has been called a ‘hidden fuel’, yet it is hiding in plain sight. “Indeed, the degree of global investment in energy efficiency and the resulting energy savings are so massive that they beg the following question: is energy efficiency not just a hidden fuel but rather the world’s first fuel?” she asked.

According to IEA, the organization calculated the energy equivalent of US$420 billion worth of oil was saved thanks to energy efficiency measures implemented by 11 of its member countries, including Australia, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, Sweden, the United Kingdom, and the US.

These measures saved citizens of said countries from paying for an additional two-thirds energy than is the case over the past three years. In fact, energy savings exceeded output from any other single fuel source in these same countries, which have avoided in excess of 1.5 billion tonnes of oil equivalent since 1974.

Global progress in energy efficiency measures is a collective result of energy prices rising and effective policy implementation, and governments and investors must keep the momentum rolling, given that globally, the next two decades will see a 54% or 230 quadrillion BTU increase in energy consumption under current usage trends.

Removable/Reusable Insulation Covers
ATC is one of the largest, most experienced designers/fabricators of removable-reusable insulation covers in North America.

- Extensive Major project expertise
- Turnkey Steam & Gas turbine removable insulation systems
- Insulation energy audits
- Experienced, accurate field design expertise
- Competitive pricing and product turnaround

Visit our website at advantothermal.com or call 1-800-268-3728 for more information
Efficiency is the New Fuel

In Canada, buildings account for nearly half of all GHG emissions produced, followed by transportation (27%) and industry (22%). Energy consumption in North America is projected to increase by 37% over the next 20 years, and GHGs are expected to increase by 36% during the same time period. At current levels, Canada has room to improve its share.

The American Council for an Energy-Efficient Economy (ACEEE) published its first International Energy Efficiency Scorecard in 2012, ranking the world’s 12 largest economies for overall energy efficiency. Canada scored 37 out of a possible 100 points, placing it eleventh on the list just above Russia.

Le progrès mondial des mesures d’efficacité énergétique découle d’une action collective en réaction à la hausse des prix de l’énergie et de la mise en œuvre de politiques efficaces; les gouvernements et les investisseurs doivent poursuivre sur leur lancée vu que, si les tendances actuelles se maintiennent, la consommation mondiale d’énergie augmentera de 54 p. 100, soit de 230 quadrillions de BTU, au cours des deux prochaines décennies.

Au Canada, le secteur du bâtiment produit près de la moitié de la totalité des émissions de GES; il est suivi des secteurs du transport (27 p. 100) et de l’industrie (22 p. 100). On prévoit que la consommation d’énergie croîtra de 37 p. 100 en Amérique du Nord au cours des vingt prochaines années et l’on s’attend à ce que les émissions de GES augmentent de 36 p. 100 durant la même période. Au Canada, vu les niveaux actuels, il y a place à amélioration.

En 2012, l’American Council for an Energy-Efficient Economy (ACEEE) a publié sa première fiche internationale d’évaluation des 12 économies les plus importantes de la planète classées en fonction de leur efficacité énergétique globale. Le Canada a obtenu 37 points sur 100, ce qui lui a valu la onzième place, juste devant la Russie.


Le Canada s’est classé au dernier rang au chapitre de la consommation d’énergie par personne, qui est de 5,69 tonnes d’équivalent pétrole — soit deux fois celle de la moyenne des Russes et six fois celle des Brésiliens.

Selon le journal The Globe and Mail, le
We know mechanical insulation inside out.
We have the information you need and want.

LET'S CONNECT  Online . In person.  On Twitter.

› energyconservationspecialists.org
› info@energyconservationspecialists.org
› 604.877.0909  › @BCEnergySavers
The study accounted for Canada’s climate, geography, and low population density, drawing on 27 categories to measure cost-cutting aspects of energy use in buildings, industry, and transportation.

Canada placed last in energy use per capita, with 5.69 tonnes of oil equivalent per person—twice that of the average Russian and six times that of Brazilians.

According to The Globe and Mail, Canada also “fell flat” in policy metrics, which awarded points for national energy-saving targets already in place.

Canada a aussi fait piétre figure dans la catégorie des mesures du rendement des politiques, qui accordait des points pour les objectifs nationaux déjà fixés en matière d’économie énergétique.

Dans une entrevue avec The Globe and Mail, Sara Hayes, recherchiste principale à l’ACEEE et coauteure de l’étude, faisait observer que les politiques nationales assorties de cibles d’efficacité sont quantifiables — elles produisent des résultats.

Selon elle, dans le cas du Canada, l’accent mis par le gouvernement sur l’exploitation des sables bitumineux n’est pas incompatible avec l’idéal qui consisterait à fixer des objectifs nationaux en matière d’efficacité. Au contraire, le Canada aurait intérêt à tout faire pour réduire sa demande d’énergie — moins on a besoin de pétrole dans son propre pays, plus on en a à exporter.

Les gouvernements fédéral et provinciaux ont mis en œuvre plusieurs initiatives d’amélioration de l’efficacité énergétique, notamment l’Initiative écoÉNERGIE sur l’innovation, qui prévoit un investissement de 268 millions de dollars sur cinq ans dans les technologies d’énergie renouvelable et d’énergie propre, et le Fonds pour l’énergie propre, qui a affecté près de 795 millions de dollars pour des projets de recherche, de développement et de démonstration destinés à affirmer le leadership du Canada en matière de technologies énergétiques propres. Ces initiatives et d’autres programmes visent à permettre au gouvernement fédéral de respecter son engagement à réduire de 17 p. 100, d’ici 2020, la totalité des émissions de GES au Canada à partir des niveaux de 2005.

Par rapport au code précédent, le Code national de l’énergie pour les bâtiments (CNÉB) 2011 accroît de 25 p. 100 l’efficacité énergétique des nouveaux bâtiments, et les mesures existantes d’économie d’énergie de RNCan peuvent donner lieu à des modernisations d’immeubles existants qui permettent de faire des économies énergétiques de 20 p. 100 ou plus, la performance des bâtiments ayant ainsi été améliorée.
PREFORMED INSULATION
Clank Heads With Matching Cladding Reduce Installation Time

ADVANTAGES:
• Precision Fit-Exact Head Contour
• Eliminates Costly Field Fabrication
• Complete Sidewall and Vessel End Insulation System
• Matching Contoured FibaClad™ System

SHAPES:
• 2:1 Elliptical
• ASME F & D
• Conical
• Spherical

MATERIALS:
• Cellular Glass
• Polyisocyanurate
• Extruded Polystyrene (XPS)
• Phenolic

Mechanically Strong
Introducing FibaClad™ Cladding:
Resistant to UV, Chemical and Mechanical Abuse

Easy Installation
Custom Fabricated/Contoured Insulation and Matching FibaClad™ Cladding Pieces Install Quickly

FibaClad™ Cladding
Redefining Protection Technology

NEW!
FibaClad™ Cladding Conforms to NSF/ANSI Standard 169
Special Purpose Food Equipment and Devices Acceptable for Splash-Zone and Non-Food Zone Applications

INSTALLS EASY AS 1, 2, 3!

208 Republic Street, Norwalk, Ohio 44857
Phone: (800) 486-9865  Fax (419) 663-1992
www.ExtolOhio.com
Efficiency is the New Fuel

L’Institut royal d’architecture du Canada (IRAC) recommande d’intégrer les mesures de conception de bâtiments durables et de conservation des ressources afin de réduire la consommation d’énergie de 10 p. 100 par an pour atteindre, d’ici 2030, la neutralité en carbone en construction et en exploitation de bâtiments.

Ce groupe invite les gouvernements à inclure des normes de performance dans les codes du bâtiment et à élaborer d’autres normes pour les bâtiments et les structures du secteur privé. Il propose aussi que les gouvernements veillent à ce que tous les immeubles financés par l’État atteignent des objectifs d’efficacité énergétique, comme c’est le cas en C.-B.

« Il faut aussi que tous les ordres de gouvernement instaurent des mesures incitatives qui auront des répercussions immédiates sur la réduction des émissions de gaz à effet de serre, tout en instaurant des mesures réglementaires à plus long terme », affirme l’IRAC dans un communiqué. « En l’an 2035, près des trois quarts de tous les bâtiments du Canada seront des bâtiments rénovés ou de nouvelles constructions. Les architectes, les designers et les constructeurs doivent y voir une occasion unique d’assumer un leadership en matière de réduction des émissions de gaz à effet de serre. »

“National policies with efficiency targets are something we can quantify—they make a difference,” said Sara Hayes, senior researcher with ACEEE and co-author of the study, in an interview with The Globe and Mail.

“In Canada’s case, the government’s emphasis on oilsands development is not incompatible to the ideal of setting national efficiency goals,” she said. “On the contrary, Canada would be very well served by doing all it can to reduce its energy demand—the less oil you need in your own country, the more oil you will have available for export.”

Federal and provincial governments have implemented several initiatives calling for greater energy efficiency including the ecoENERGY Innovation Initiative, which invests $268 million over five years into renewable energy and clean energy technology, and the Clean Energy Fund, which earmarked almost $795 million to support research, development, and demonstration projects that will advance Canadian leadership in clean energy technologies. These and other programs seek to fulfill the federal government’s commitment to reduce Canada’s total GHG emissions by 17% from 2005 levels by 2020.

The National Energy Code for Buildings (NECB) 2011 improves the energy efficiency in new buildings by 25% over the previous code, and NRCan’s existing energy savings...
Recent NFPA statistics indicate significant injuries, loss of life and property damage due to clothes dryer fires in residential buildings. At the same time, code requirements for dryer exhaust ductwork in multi-family residences have been difficult to achieve in real-world conditions – until now.

Introducing new FyreWrap® DPS Insulation for dryer ducts and plenums.

FyreWrap® DPS Insulation is an innovative duct wrap that provides a safe and cost-effective means to achieve a 1-hour fire resistance-rated enclosure for routing dryer ductwork through rated wood construction. It utilizes a lightweight, high temperature, low bio persistence fiber blanket specifically designed, UL tested and classified for this critical application. It also provides code compliant fire protection for combustible items such as plastic pipes in the plenum area. FyreWrap DPS Insulation features a ½”, single layer design that is flexible and easy to cut, fabricate and wrap to fit tight spaces, providing time- and cost-savings on many projects.

More information on FyreWrap DPS and our complete line of FyreWrap products is available at www.arcat.com and www.unifrax.com or by calling 1-800-635-4464.
measures can result in building retrofits that save 20 per cent or more with better building performance.

The Royal Architectural Institute of Canada (RAIC) suggests incorporating sustainable building design and resource conservation measures to reduce significant energy use reduction at a rate of ten percent per year until achieving carbon neutrality in building construction and operation by 2030.

The group calls on governments to implement building performance standards into buildings codes and other standards for private sector buildings and structures. It also suggests creating government mandates that all publicly funded buildings meet energy efficiency targets, as is the case in B.C.

“Incentive-based measures are needed by all levels of government to effect immediate reductions in greenhouse gas emissions, while longer-term regulatory measures are put into place,” says a news release from RAIC. “By the year 2035 nearly three quarters of Canada’s buildings will be new or renovated and this affords a great opportunity for architects and the design and construction sector to be leaders in addressing greenhouse gas emissions.”
Thermo-12® Gold: The best insulation for your high-temperature job.

RESUME
Thermo-12 Gold

QUALIFICATIONS:

- Maintains structural integrity and thermal performance at temperatures up to 1200°F.
- XOX™ corrosion inhibitor protects pipe and equipment.
- High-compressive strength resists maintenance abuse.
- Non-combustible (ASTM E136) for fire protection.
- Proven performance that lasts for the life of the pipe and equipment.
- Available in both pipe and block form.

EXPERIENCE:

- Thermo-12 Gold high-temperature insulation has been used for over 40 years in refining, power generation, chemical processing and facilities utilizing medium and high-pressure steam.
- Each project benefits in the long-term from reduced emissions, reduced heat loss, less maintenance and personnel protection from hot pipe and equipment.

REFERENCES:

- Product manufactured and tested to meet more than 20 ASTM, government and international standards.
- Thermo-12 Gold is manufactured under a certified ISO 9001 Quality Management System.

Industrial Insulation Group, LLC
A Johns Manville Company
To learn more, please visit us at www.iig-llc.com
In most outdoor applications and some indoor locations, mechanical insulation systems use an outer protective metal jacketing to provide UV resistance, damage resistance, and water shedding. Regardless of metal type, this jacketing is susceptible to galvanic and pitting/crevice type corrosion on the interior surface caused by the intrusion of water into the insulation system. The best way to prevent corrosion is to factory heat laminate a 76 µm (3 mil) multi-layer polysurlyn moisture barrier to the interior surface of the metal jacketing.

Part 1 of this article in the previous issue introduced the background of this problem, described the chemistry of the metal jacketing corrosion, and presented lab test results that demonstrated the importance of using a polysurlyn moisture barrier (PSMB) on the interior surface of the metal jacketing.

Part 2 of this article will continue with a description of many real-world interior jacket surface corrosion problems that have been encountered when PSMB was not used, a comparison of the types of moisture barriers available and their properties to demonstrate why PSMB is the optimum alternative, and finish with recommendations for the insulation contractor and facility owner related to preventing interior jacket corrosion.

Real-World Results
In all but one of the real-world examples in Table 1 the metal jacketing was aluminum with a polykraft moisture barrier. In the second example, the jacketing was stainless steel with no moisture barrier (i.e. bare) and this led to a galvanic corrosion reaction between the stainless jacketing and the aluminum foil in the underlying vapor retarder.

It has been shown that corrosion science, lab test results, and now real-world field experience are all in agreement. Interior surface jacket corrosion is an equal opportunity thief. It can steal longevity from insulation systems in all industries, all applications, using all insulation types, with all metal jacketing types, and in all climates. The best way to prevent the occurrence of this type of corrosion is the use of an effective moisture barrier like PSMB on the interior surface of the metal jacketing.
<table>
<thead>
<tr>
<th>Facility Description</th>
<th>Application Type</th>
<th>Insulation System</th>
<th>Climate Type</th>
<th>Corrosion Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food/beverage plant in PA, USA</td>
<td>Ammonia refrigeration, continuous use</td>
<td>PIR with ASJ vapor retarder</td>
<td>Cold</td>
<td>Significant interior surface jacket corrosion six years after installation. Jacketing was replaced</td>
</tr>
<tr>
<td>Large LNG export terminal</td>
<td>Cryogenic pipe, continuous use</td>
<td>PIR with bare metal jacketing</td>
<td>Hot</td>
<td>Galvanic corrosion reaction between stainless jacketing and aluminum foil in vapor retarder</td>
</tr>
<tr>
<td>Four power plants in NE, USA</td>
<td>Hot pipe, intermittent use</td>
<td>Mineral wool</td>
<td>Cold</td>
<td>Significant interior surface jacket corrosion</td>
</tr>
<tr>
<td>Three asphalt plants in USA</td>
<td>Hot pipe, intermittent use</td>
<td>Glass fiber with ASJ vapor retarder</td>
<td>Cold</td>
<td>Significant interior surface jacket corrosion</td>
</tr>
<tr>
<td>Six cold storage warehouses</td>
<td>Rooftop ammonia refrigeration, continuous use</td>
<td>XPS Pipe Billet with ASJ vapor retarder</td>
<td>Hot &amp; cold</td>
<td>Water present between ASJ and jacket. Significant interior surface jacket corrosion. Jacketing was replaced</td>
</tr>
<tr>
<td>Heavy equipment factory</td>
<td>Chilled water, continuous use</td>
<td>Cell glass with ASJ vapor retarder</td>
<td>Hot</td>
<td>Significant interior surface jacket corrosion</td>
</tr>
<tr>
<td>Hospital</td>
<td>Chilled water, summer use only</td>
<td>Glass fiber with ASJ vapor retarder</td>
<td>Cold</td>
<td>Significant interior surface jacket corrosion</td>
</tr>
</tbody>
</table>

**Table 1 – Real-world examples of interior surface metal jacketing corrosion**

<table>
<thead>
<tr>
<th>Description des installations</th>
<th>Type d’application</th>
<th>Type d’isolation</th>
<th>Climat</th>
<th>Observations sur la corrosion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usine d’aliments et de boissons en Pennsylvanie aux É.-U.</td>
<td>Réfrigération à l’ammoniac, emploi continu</td>
<td>PIR avec pare-vapeur ASJ</td>
<td>Froid</td>
<td>Corrosion considérable sur la face interne du revêtement six ans après l’installation. Le revêtement a été remplacé.</td>
</tr>
<tr>
<td>Grande installation d’exportation de GNL</td>
<td>Tuyaux d’une application à très basse température, emploi continu</td>
<td>PIR avec chemisage métallique nu</td>
<td>Chaud</td>
<td>Réaction de corrosion galvanique entre le revêtement métallique et la feuille d’aluminium du coupe-vapeur</td>
</tr>
<tr>
<td>Quatre centrales électriques au Nebraska, É.-U.</td>
<td>Tuyaux d’une application à température élevée, emploi intermittent</td>
<td>Laine minérale</td>
<td>Froid</td>
<td>Corrosion considérable sur la face interne du revêtement</td>
</tr>
<tr>
<td>Trois usines de production d’asphalte aux É.-U.</td>
<td>Tuyaux d’une application à température élevée, emploi intermittent</td>
<td>Fibre de verre avec pare-vapeur ASJ</td>
<td>Froid</td>
<td>Corrosion considérable sur la face interne du revêtement</td>
</tr>
<tr>
<td>Six entrepôts réfrigérés</td>
<td>Installations de réfrigération à l’ammoniac sur le toit, emploi continu</td>
<td>Billette d’isolant pour tuyau en PSX avec pare-vapeur ASJ</td>
<td>Chaud et froid</td>
<td>Présence d’eau entre le pare-vapeur ASJ et le chemisage. Corrosion considérable sur la face interne du revêtement. Le revêtement a été remplacé.</td>
</tr>
<tr>
<td>Usine de construction de matériel lourd</td>
<td>Circuit d’eau réfrigérée, emploi continu</td>
<td>Verre cellulaire avec pare-vapeur ASJ</td>
<td>Chaud</td>
<td>Corrosion considérable sur la face interne du revêtement</td>
</tr>
<tr>
<td>Hôpital</td>
<td>Circuit d’eau réfrigérée, emploi en été seulement</td>
<td>Fibre de verre avec pare-vapeur ASJ</td>
<td>Froid</td>
<td>Corrosion considérable sur la face interne du revêtement.</td>
</tr>
</tbody>
</table>

**Moisture Barriers**

There are three general types of moisture barriers used on metal jacketing in mechanical insulation systems—paint, polykraft, and polysurlyn. Painted moisture barrier is a thin (~18 µm, 0.7 mil) layer of lightly pigmented paint that is typically applied in the mill that produces the metal coils. This type of moisture barrier is common on pre-formed two-piece elbows where it is probably acceptable due to the ultrapure corrosion resistant alloy of aluminum used on these elbows. Polykraft is a layer of kraft paper laminated to a single thin layer of polyethylene film. This lamination is performed by a metal jacketing company. Polykraft is outdated and ineffective technology. Polysurlyn moisture barrier (PSMB) is a thick

**Pare-humidité**

Il existe trois grands types de pare-humidité pour le chemisage métallique des produits isolants de systèmes mécaniques — la peinture, le Polykraft et le PolySurlyn. L’enduit employé parfaitement. La corrosion de la face interne des revêtements métalliques ne fait pas de distinction. Elle peut atteindre la longévité des systèmes d’isolation dans tous les secteurs, et ce indépendamment du type d’application, d’isolant et de revêtement métallique, et du climat. Le meilleur moyen d’empêcher ce type de corrosion est d’employer une membrane pare-vapeur efficace comme le PVPS sur la face interne du revêtement métallique.
three-layer film that is applied by a jacketing company and represents the current state of the art for moisture barriers.

The real-world examples described above strongly indicate that polykraft is ineffective and PSMB is quite effective at preventing this corrosion but why is this? To answer this, the properties of the various moisture barriers must be considered in light of the main purpose of the moisture barrier, which is to keep water from contacting the underside of metal jacketing to reduce corrosion potential.

With this purpose in mind, the key properties of a moisture barrier are:

- Pinholes – Each pinhole is a place where corrosion can start
  - Fewer is better and zero pinholes is most desirable
- Water resistance – Keep the corrosive water from touching the interior metal surface
  - Low water absorption and low water vapor transmission rate are desirable
- Toughness/durability – Damaged or decayed moisture barrier from the inevitable rough handling and installation is a likely starting point for possible corrosion
  - Strong, tough, scratch resistant, and durable film is desirable
- Flammability – Lower flammability is preferred

...comme pare-humidité s’étend en une couche mince (~18 µm, 0,7 de millième de pouce) d’une peinture légèrement pigmentée appliquée dans l’usine qui produit les bobines de métal. Ce type de pare-humidité se retrouve le plus souvent sur des coudes préformés en deux pièces ; cette solution est acceptable étant donné la très grande pureté de l’alliage d’aluminium résistant à la corrosion employé pour ces coudes. Le Polykraft est constitué d’une couche de papier kraft laminée sur une seule couche mince d’une membrane de polyéthylène. L’opération de lamination est effectuée par l’entreprise de revêtement métallique. L’emploi du Polykraft est désuet et inefficace. Le pare-vapeur en PolySurlyn (PVPS) est une membrane épaisse constituée de trois couches que l’entreprise de revêtement laminé sur la face interne du chemisage. Ce type de pare-vapeur est considéré comme la technologie de pointe dans le domaine.

D’après ces exemples de corrosion réelle, on comprendra que le Polykraft n’est pas efficace et que le PVPS réussit à empêcher la corrosion. Mais pourquoi au juste ? Pour répondre à cette question, il faut examiner les propriétés des divers pare-vapeur dans le contexte général de leur fonction même, qui consiste à empêcher l’eau d’entrer en contact avec la face interne du chemisage, et ce afin de réduire le potentiel de corrosion.

Les principales caractéristiques et propriétés d’un pare-humidité sont les suivantes :

- Piqûre – Chaque piqûre peut devenir le siège de réactions de corrosion.
  - Moins il y a de piqûres, mieux c’est ! Zéro est l’idéal.
- Résistance à l’eau – L’eau dont l’action est corrosive ne touchera pas la face interne du métal.
  - De faibles taux d’absorption d’eau et de perméabilité à la vapeur d’eau sont souhaitables.
- Robustesse / durabilité – Un pare-vapeur endommagé ou détérioré par suite des opérations de manutention et d’installation résiste moins bien à la corrosion.
  - Une membrane robuste, durable et résistant aux égratignures est souhaitable.
- Inflammabilité – Un faible degré d’inflammabilité est préférable.
When Performance and Quality Matter Most.

"Proto products are engineered and designed to the highest performance and quality standards in the industry."

- Billy G.
  Product Engineer, 24 Years

Uncompromising Quality. Reliable Performance. That’s the Proto Way.

At Proto, every product we manufacture stands up to rigorous testing and delivers consistent performance, day in and day out. Couple that with the outstanding care you’ll receive from our customer service team and you’ll see why so many companies choose Proto as their vendor of choice. When it comes to PVC products for the insulation industry, nobody does it better.

Contact us today to experience the Proto difference.
See Table 2 – Properties of moisture barriers

As corrosion science, lab testing, real-world examples, and now moisture barrier properties demonstrate, polysurlyn moisture barrier is the most effective way to prevent interior surface corrosion of metal insulation jacketing because it:

- Has proven performance
- Has no pinholes
- Is a multilayer film
- Has very low water vapor transmission rate
- Has very low water absorption
- Is tough, scratch resistant, and durable
- Has very low flammability
- Has excellent adhesion to metal substrates
- Is available on all metal types
- Is available from many metal jacketing manufacturers

**Contractor and Facility Owner Recommended Actions**

Insulation contractors should minimize damage to the moisture barrier during cutting, field fabrication, and installation. They should educate workers on moisture barriers and their importance. They should buy metal jacketing only with PSMB. For aluminum jacketing, the easiest way to assure it has a PSMB is to use the new ASTM standard for this type of jacketing and specify that it comply with ASTM C1729, Type I, Grade 1 or 2, Class A. Lastly, contractors should recommend

---

**Tableau 2 – Propriétés et caractéristiques des pare-humidité**

Comme la science de la corrosion, les essais en laboratoire, les cas réels de corrosion et le tableau des propriétés ici le démontrent, le pare-vapeur en PolySurlyn est le meilleur moyen d’empêcher la corrosion de se former sur la face interne du chemisage de métal :

- son rendement a été éprouvé,
- il ne présente pas de piqûres,
- il est constitué d’une membrane à plusieurs couches,
- il est associé à un très faible taux de perméabilité à la vapeur d’eau,
- il est associé à une très faible absorption d’eau,
- il est robuste, résistant aux égratignures et durable,
- il est associé à un très faible taux d’inflammabilité,
- il possède une excellente adhérence aux substrats métalliques,
- il peut être laminé à tous les types de métal,
- il est vendu par de nombreux fabricants de revêtement métallique.

**Recommandations à l’intention des entrepreneurs et des propriétaires d’immeubles**

Les entrepreneurs en isolation doivent prendre garde de ne pas endommager les pare-humidité quand ils coupent, fabriquent et installent leurs produits. Ils doivent sensibiliser les travailleurs à l’importance des pare-vapeur.
<table>
<thead>
<tr>
<th>Property</th>
<th>Paint</th>
<th>Polykraft</th>
<th>Polysurlyn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moisture Barrier Description</td>
<td>1 layer at ~18 µm (0.7 mils thick)</td>
<td>1 layer of 38 µm (1.5 mil) thick with Kraft paper backing</td>
<td>3 layer polymer film with total thickness of 76 µm (3 mils)</td>
</tr>
<tr>
<td>Pinholes per 4.6 m² (50 ft²) via ASTM C1729 Method</td>
<td>&gt;19</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Water Resistance WVTR (g/100 in²-day)</td>
<td>Unknown</td>
<td>Poor at about 1.0</td>
<td>Excellent &gt;0.05</td>
</tr>
<tr>
<td>Toughness</td>
<td>Easily scratched</td>
<td>Paper easily damaged</td>
<td>Strong and scratch resistant</td>
</tr>
<tr>
<td>Flammability</td>
<td>Good</td>
<td>Unknown but exposed paper surface has autoignition temp of ~232°C (450°F)</td>
<td>Tested on aluminum using ASTM E84 yielding flame/smoke/of 0/5 Autoignition temp for polysurlyn is &gt;316°C (600°F)</td>
</tr>
</tbody>
</table>

**Table 2 – Properties of moisture barriers**

<table>
<thead>
<tr>
<th>Propriété</th>
<th>Peinture</th>
<th>Polykraft</th>
<th>Polysurlyn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description du pare-humidité</td>
<td>Une couche de ~18 µm (0.7 de millième de pouce) d’épaisseur</td>
<td>Membrane de PE en une couche de 38 µm (1.5 millième de pouce) d’épaisseur apposée à du papier kraft</td>
<td>Membrane en trois couches d’une épaisseur totale de 76 µm (3 millièmes de pouce) en polymère</td>
</tr>
<tr>
<td>Piqûres par superficie de 4,6 m² (50 pi²) selon la méthode ASTM C1729</td>
<td>&gt;19</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Résistance à l’eau TPVE (g/100 po2-jour)</td>
<td>Inconnue</td>
<td>Médiocre, à environ 1,0</td>
<td>Excellente &gt;0.05</td>
</tr>
<tr>
<td>Robustesse</td>
<td>S’égratigne facilement.</td>
<td>Le papier s’endommage facilement.</td>
<td>Robuste et résistant aux égratignures</td>
</tr>
<tr>
<td>Inflammabilité</td>
<td>Bonne</td>
<td>Inconnue, mais la surface de papier exposée est associée à un point d’inflammation spontanée de ~232°C (450 oF).</td>
<td>Essai sur l’aluminium selon la norme ASTM E84 – indice flamme / fumée de 0 / 5 Point d’inflammation spontanée pour le Polysurlyn de &gt; 316°C (600 oF).</td>
</tr>
</tbody>
</table>
Causes and Prevention of Corrosion

the use of PSMB lined metal jacketing to specifiers, engineers, and owners who are unaware of its importance.

Owners and engineers should specify metal jacketing only with PSMB. For aluminum jacketing, the easiest way to assure it has a PSMB is to use the new ASTM standard for this type of jacketing and specify that it comply with ASTM C1729, Type I, Grade 1 or 2, Class A. Lastly, owners and engineers should ensure that contractors know about PSMB and know to minimize damage to it during handling and installation.

Conclusion

Interior surface corrosion of metal jacketing on mechanical insulation is a major potential problem with all metal types. All metal insulation jacketing should have 76 µm (3 mil) thick polysurlyn moisture barrier (PSMB) factory heat laminated on the inside surface to protect against jacket corrosion for aluminum and aluminum coated steel jacket and to protect against pipe corrosion when stainless steel jacket is used. Use of PSMB is cheap insurance to prevent the very costly alternative of jacket corrosion.

Contractors and Owners should use/specify PSMB on the inside surface of all metal jacketing and minimize damage to the moisture barrier during handling and installation.

Did you know we’re now accepting new product news submissions for www.tiac TIMES.com? Submit your product press releases and supporting materials to our editor, Jessica Kirby, at jessica.kirby@pointonemedia.com

Do you have an interesting project on the go? Submit the details to our editor, Jessica Kirby, at jessica.kirby@pointonemedia.com

Sometimes waiting is not an option - Multi-Groove™

- Ships up to four times more per truck than pre-formed pipe
- Meets all ASTM standards (1200°F / 649°C)
- Readily available, with or without vapour barrier
- Custom-made (NPS from 1” to 36”)
- 100% Canadian-made

Ask for Multi-Groove™ 877-822-0635 • www.multiglass.com

Interior surface corrosion of metal jacketing on mechanical insulation is a major potential problem with all metal types.
BCICA Offers Quality Assurance Certificate Program

As part of an overall strategic plan, BCICA is currently advertising and promoting a Quality Assurance Certificate (QAC) program based on three key elements.

1. Only work performed by BCICA active (contractor) members is eligible for a QAC. BCICA expects its members to hire and support qualified Heat & Frost journeypersons. As part of the QAC requirement, mechanical insulation (MI) work must be supervised and installed by individuals holding a TQ or IP ticket. Apprentices must be registered.

2. The materials used for the MI installation must meet a recognized ASTM or CAN / ULC standard for use in the QAC program. Acceptable standards are listed in the recently rewritten BCICA Standards Manual. Only products manufactured by BCICA Associate members are acceptable for use in a QAC specification.

3. QAC work is independently inspected by purpose trained MI inspectors that observe and report during MI installation. A QAC can only be issued once the final inspection is complete with any deficiencies addressed.

BCICA has developed an online MI Inspection program consisting of four courses. Each course is designed to assist students to increase their knowledge of the MI industry. The first course focuses on materials used in the trade, the second on MI installation techniques. The third course is to assist individuals with report writing and the final is a “hands on” course held at BCIT in Burnaby BC.

The program is of interest to anyone working in the MI industry. The first two course should be mandatory for anyone working in MI sales and distribution, MI manufacturing, as well as individuals tasked with providing technical guidance to specifiers. Currently a list is being established for the next cohort. For more information please contact brian.bcica@telus.net.

All Therm Expands Management Team

All Therm Services Inc. is pleased to announce the addition of Craig Austin to its management team. After 17 years as the owner/operator of a mechanical insulation distribution company in British Columbia, Craig has decided to make a career change and All Therm is honoured he chose to join our company. Craig will have full P&L responsibility of our Burnaby, B.C. operations.

Nomination à l’équipe de direction de All

All Therm Services Inc. a le plaisir d’annoncer l’arrivée de Craig Austin au sein de son équipe de direction. Possédant dix-sept ans d’expérience comme propriétaire-exploitant d’une entreprise de distribution de produits d’isolation pour systèmes mécaniques en Colombie-Britannique, M. Austin a décidé de faire un changement dans sa vie professionnelle et All Therm l’honneur de le voir se joindre à son entreprise. M. Austin aura la pleine responsabilité des résultats financiers de nos installations à Burnaby, en Colombie-Britannique.

Are you reading a borrowed copy of Tiac Times?

Subscriptions are free for industry professionals.

Subscribe at www.tiactimes.com

Insulation and Fire Stop Specialists

Office: 604-874-9615
Fax: 604-874-9611
Email: RFQ@tight5.net

#108 - 4238 Lozells Avenue
Burnaby, BC V5A 0C4

www.tight5.net
SASKATCHEWAN

Alsip’s Building Products & Services
Saskatoon, SK .................................. (306) 384-3588

Brock White Canada
Regina, SK ..................................... (306) 721-9333
Saskatoon, SK .................................. (306) 931-9255

Crossroads C&I Distributors
Regina, SK ..................................... (306) 551-6507

Nu-West Construction Products Inc.
Saskatoon, SK (Corporate) ............... (306) 931-9255
Saskatoon, SK .................................. (306) 934-4536

Wallace Construction Specialties Ltd.
Regina, SK ..................................... (306) 569-2334
Saskatoon, SK .................................. (306) 653-2020

ONTARIO

Brock White Canada
Thunder Bay ................................... (807) 623-5556
Montreal, QC ................................. (514) 361-4251

Dispro Inc.
Ottawa .......................................... (800) 361-4251

Multi-Glass Insulation Ltd.
Montreal, QC ................................. (514) 354-5250

Nadeau
Québec City, QC ............................... (418) 463-5037

ONTARIO

Dispro Inc.
Ottawa .......................................... (800) 361-4251

Multi-Glass Insulation Ltd.
Montreal, QC ................................. (514) 354-5250

Nadeau
Québec City, QC ............................... (418) 463-5037

NEW BRUNSWICK

Multi-Glass Insulation Ltd.
Saint John, NB ................................. (506) 633-7595

Scotia Insulations Ltd.
Saint John, NB ................................. (506) 632-7798

NEWFOUNDLAND & LABRADOR

Multi-Glass Insulation Ltd.
St. John’s, NL ................................. (709) 368-2845

Scotia Insulations Ltd.
Mount Pearl, NL ............................... (709) 747-6688

Thermal Insulation Association of Canada
Association Canadienne de l’isolation thermique

BECOME A MEMBER OF TIAC TODAY

Interested in becoming a member? Contact the TIAC office for more information.

1485 Laperriere Avenue, Ottawa, ON K1Z 7S8 • T: 613.724.4834 • F: 613.729.6206

If you’re already and member and would like to appear in the TIAC Distributor Directory please contact:

Lara Perraton, TIAC Times
tel: 1.877.755.2762
e-mail: lperraton@pointonemedia.com
What a Tangled Web We Weave When First We Practice to Deceive

Homeowners, developers, and contractors should think twice before entering into a residential construction contract for the construction of a home with a planned illegal suite. Deliberately deceiving the municipal authorities may impact a party’s ability to obtain court-ordered relief for monies owed under the contract. This risk was illustrated by the recent decision of the BC Supreme Court in *Shafazand v. Whitestone Management Ltd.*

Facts

Whitestone Management Ltd. ("Whitestone") is a developer who was hired by a client to build a single family home in the City of Vancouver. Whitestone hired Competitive Quality Contractors (the “Contractor”) to build the home for a fixed price of $571,200 including taxes. The written contract provided for the construction of an illegal suite in the basement of the home following the City's final inspection and issuance of its occupancy permit. To obtain a building permit, Whitestone submitted plans to the City that were deliberately altered to conceal the illegal basement suite. The Contractor was fully aware that the plans submitted to the City were misleading.

The Contractor eventually sued for $137,405.17 for alleged extra work. With a few exceptions, Whitestone denied that it owed the Contractor for the extras and countersued for $71,421.21, amounting to the extra work Whitestone said it had performed to complete the contract.

**La question**

Le tribunal doit-il accorder un dédommagement aux parties alors qu'elles ont trompé les instances municipales en toute connaissance de cause ?

**Le décision du tribunal**

Se fondant sur la preuve déposée, le tribunal a conclu que...
$71,421.21, which Whitestone said it spent to complete the work under the Contract.

Issues
Should the court grant relief to either party where they have set out to deceive the municipal authorities?

Court Decision
Based on the evidence presented, the court held that the Contractor was entitled to recover $18,952.35 for extra work, but that Whitestone was entitled to recover $71,421.21 on its counterclaim. This resulted in a balance of $52,468.86 owing to Whitestone. The court noted that Whitestone would normally be entitled to judgment for this amount. However, the court went on to consider whether Whitestone should be entitled to recover this amount because it deliberately deceived the municipal authorities by submitting false plans to the City.

The court referred to an earlier BC Supreme Court case which also involved an agreement to construct a home with an illegal suite. In that case, the court considered the “illégalité” doctrine. Where an agreement is illegal due to the operation of a statute, the effect of the illegality may differ based on a consideration of, “the relative merits of the parties; the purpose of the statute and the policy upon which it is founded; whether the statute contains the consequences of the illegality; and, whether a voiding of the agreement results in a de facto penalty that is disproportionate to the breach itself.” Ultimately, the court in the earlier case decided that it would be wrong to prevent the plaintiff from recovering the costs of construction to which it was entitled as doing so would have created a double benefit to the defendant, who would have been spared the additional costs of construction but also benefitted from the use of the illegal suite.

In the current case, however, Whitestone had already sold the home to the homeowner and had been paid for the illegal suite. In the court’s opinion, although it would be unfair to allow the Contractor’s claim without setting off Whitestone’s counterclaim against it, it would not be unfair to prohibit Whitestone from recovering the balance of its counterclaim. The court held that Whitestone should not be rewarded for its dishonest conduct and that to deny Whitestone the benefit of the balance of its counterclaim would not be disproportionate to that conduct. As such, the court concluded that it would be against public policy to grant judgment to Whitestone for the balance of its counterclaim. The court dismissed the claims of both parties and ordered that they each pay their own legal costs.

Lessons Learned
Parties who contract for the construction of a project that contains an illegal element, such as an illegal suite, should be

continued on page 46
extremely careful. If they deliberately deceive the municipal authorities about the nature of the project, they may be denied court-ordered relief for monies owed under the contract.

This article was written by Ian Moes and Micaela Carlson, lawyers with the law firm of Kuhn LLP. It is only intended as a guide and it is important to get legal advice for specific situations. If you have questions or comments about this case or other construction law matters, please contact Ian or Micaela at 1-888-704-8877.

---

<table>
<thead>
<tr>
<th>Advertiser / Compagnie</th>
<th>Page</th>
<th>Phone</th>
<th>Web</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adler Insulation (2005) Inc.</td>
<td>41</td>
<td>780.962.9495</td>
<td><a href="http://www.adlerinsulation.com">www.adlerinsulation.com</a></td>
</tr>
<tr>
<td>Advance Thermal Canada</td>
<td>25</td>
<td>800.268.3728</td>
<td><a href="http://www.advancethermal.com">www.advancethermal.com</a></td>
</tr>
<tr>
<td>Aeroflex USA Inc.</td>
<td>22-23</td>
<td>866.237.6235</td>
<td><a href="http://www.aeroflexusa.com">www.aeroflexusa.com</a></td>
</tr>
<tr>
<td>All Therm Services Inc.</td>
<td>44</td>
<td>604.354.8909</td>
<td><a href="http://www.alltherm.ca">www.alltherm.ca</a></td>
</tr>
<tr>
<td>Amity Insulation Group Inc.</td>
<td>11</td>
<td>780.454.8558</td>
<td>e: <a href="mailto:sales@amityinsulation.com">sales@amityinsulation.com</a></td>
</tr>
<tr>
<td>Avery Dennison</td>
<td>5</td>
<td>800.321.1534</td>
<td><a href="http://www.averydennison.com">www.averydennison.com</a></td>
</tr>
<tr>
<td>BC Insulation Contractors Association</td>
<td>IFC</td>
<td>604.438.6616</td>
<td><a href="http://www.bcica.org">www.bcica.org</a></td>
</tr>
<tr>
<td>BC Insulators, Local 118</td>
<td>27</td>
<td>604.877.0909</td>
<td>energyconservationspecialists.org</td>
</tr>
<tr>
<td>Brock White Canada</td>
<td>26</td>
<td>403.287.5889</td>
<td><a href="http://www.brockwhite.ca">www.brockwhite.ca</a></td>
</tr>
<tr>
<td>C&amp;G Insulation Ltd.</td>
<td>20</td>
<td>250.769.3303</td>
<td>e: <a href="mailto:candginsulation@shawbiz.ca">candginsulation@shawbiz.ca</a></td>
</tr>
<tr>
<td>Crossroads C&amp;I Distributors Inc.</td>
<td>32</td>
<td>604.421.1221</td>
<td><a href="http://www.crossroadsci.com">www.crossroadsci.com</a></td>
</tr>
<tr>
<td>Delta T Components</td>
<td>4</td>
<td>250.769.7707</td>
<td>n/a</td>
</tr>
<tr>
<td>Dispro Inc.</td>
<td>40</td>
<td>800.361.4251</td>
<td><a href="http://www.dispro.com">www.dispro.com</a></td>
</tr>
<tr>
<td>Dyplast Products</td>
<td>11</td>
<td>800.433.5551</td>
<td><a href="http://www.dyplast.com">www.dyplast.com</a></td>
</tr>
<tr>
<td>Extol of Ohio Inc.</td>
<td>29</td>
<td>800.486.9865</td>
<td><a href="http://www.extolohio.com">www.extolohio.com</a></td>
</tr>
<tr>
<td>Firwin Alberta Corp.</td>
<td>18</td>
<td>877.784.9784</td>
<td><a href="http://www.firwinalberta.com">www.firwinalberta.com</a></td>
</tr>
<tr>
<td>Ideal Products of Canada Ltd.</td>
<td>9</td>
<td>800.299.0819</td>
<td><a href="http://www.idealproducts.ca">www.idealproducts.ca</a></td>
</tr>
<tr>
<td>Industrial Thermo Polymers Limited</td>
<td>32</td>
<td>800.387.3847</td>
<td><a href="http://www.tundrafoam.com">www.tundrafoam.com</a></td>
</tr>
<tr>
<td>Insulation Applicators Ltd.</td>
<td>44</td>
<td>306.949.1630</td>
<td>e: <a href="mailto:waynebell@sasktel.net">waynebell@sasktel.net</a></td>
</tr>
<tr>
<td>International Insulation Group LLC</td>
<td>33</td>
<td>800.866.3234</td>
<td><a href="http://www.iig-llc.com">www.iig-llc.com</a></td>
</tr>
<tr>
<td>Johns Manville</td>
<td>15</td>
<td>800.654.3103</td>
<td><a href="http://www.specJM.com">www.specJM.com</a></td>
</tr>
<tr>
<td>MFM Building Products Corp.</td>
<td>28</td>
<td>800.882.7663</td>
<td><a href="http://www.solutions.flexclad.com">www.solutions.flexclad.com</a></td>
</tr>
<tr>
<td>Multi-Glass Insulation Ltd.</td>
<td>10, 40</td>
<td>877.822.0635</td>
<td><a href="http://www.multiglass.com">www.multiglass.com</a></td>
</tr>
<tr>
<td>NDT Seals</td>
<td>23</td>
<td>800.261.6261</td>
<td><a href="http://www.ndtseals.com">www.ndtseals.com</a></td>
</tr>
<tr>
<td>Nu-West Construction Products Inc.</td>
<td>36</td>
<td>800.667.3766</td>
<td><a href="http://www.nu-west.ca">www.nu-west.ca</a></td>
</tr>
<tr>
<td>Owens Corning Insulating Systems, LLC</td>
<td>19</td>
<td>800.GET.PINK</td>
<td><a href="http://www.owenscorningpipe.com">www.owenscorningpipe.com</a></td>
</tr>
<tr>
<td>PCI Contracting Canada</td>
<td>39</td>
<td>902.407.4060</td>
<td><a href="http://www.pcicontracting.ca">www.pcicontracting.ca</a></td>
</tr>
<tr>
<td>Polyguard Products Inc.</td>
<td>21</td>
<td>214.515.5000</td>
<td><a href="http://www.polyguardproducts.com">www.polyguardproducts.com</a></td>
</tr>
<tr>
<td>Proto Corporation</td>
<td>37</td>
<td>800.875.7768</td>
<td><a href="http://www.protocorporation.com">www.protocorporation.com</a></td>
</tr>
<tr>
<td>Roxul Inc.</td>
<td>IBC</td>
<td>800.265.6878</td>
<td><a href="http://www.roxul.com">www.roxul.com</a></td>
</tr>
<tr>
<td>RPR Products, Inc.</td>
<td>38</td>
<td>800.231.0149</td>
<td><a href="http://www.rprhouston.com">www.rprhouston.com</a></td>
</tr>
<tr>
<td>S. Fattals Canvas Inc.</td>
<td>4, 36</td>
<td>800.361.9571</td>
<td>e: <a href="mailto:info@fattal.ca">info@fattal.ca</a></td>
</tr>
<tr>
<td>Shur-Fit Products Ltd.</td>
<td>32</td>
<td>866.748.7348</td>
<td><a href="http://www.shurfitproducts.com">www.shurfitproducts.com</a></td>
</tr>
<tr>
<td>Thermo Applicators Inc.</td>
<td>4</td>
<td>204.222.0920</td>
<td>e: <a href="mailto:info@thermoapplayers.com">info@thermoapplayers.com</a></td>
</tr>
<tr>
<td>Tight 5 Contracting Ltd.</td>
<td>41</td>
<td>604.874.9615</td>
<td><a href="http://www.tight5.net">www.tight5.net</a></td>
</tr>
<tr>
<td>Unifrax LLC</td>
<td>31</td>
<td>800.635.4464</td>
<td><a href="http://www.unifrax.com">www.unifrax.com</a></td>
</tr>
<tr>
<td>Wallace Construction Specialties Ltd.</td>
<td>20</td>
<td>800.596.8666</td>
<td><a href="http://www.wallace.sk.ca">www.wallace.sk.ca</a></td>
</tr>
<tr>
<td>Winroc/SPI</td>
<td>30</td>
<td>403.720.6255</td>
<td><a href="http://www.winrocspl.com">www.winrocspl.com</a></td>
</tr>
</tbody>
</table>

TIAC Distributors / Manufacturers 42 - 43 / OBC
Introducing ProRox® and SeaRox®.

The new Global assortment for Performance Driven Solutions

Unlock the future of insulation at www.roxul.com or call 800.265.6878

Beyond Density
The global language of insulation is now written in stone.
ISSUE SPONSORS

Special Thanks to our Issue Sponsors

ALPHA
high performance fabrics & composites

AVERY DENNISON

Industrial Insulation Group, LLC
A Johns Manville Company

Johns Manville

Owens Corning
INNOVATIONS FOR LIVING™

Polyguard
Innovation based. Employee owned. Expect more.

ROXUL
The Better Insulation™