When Giffin Sheet Metals Ltd. needed a large quantity of aluminized steel for an automotive project in Alliston, Ontario, the Toronto contractor reached out to a U.S. supplier in southeastern Michigan. Aluminized steel is harder to come by in Canada and the company required several hundred thousand pounds. It was a transaction the 70-year-old company had done many times before, and with the 24-year-old North American Free Trade Agreement, such cross-border purchases were virtually hassle-free.

continued on page 8
Forward-Thinking Approaches

As you read through this month’s issue of SMACNews, you may notice a few stories focused on the industrial market sector. What you may not have noticed is that each SMACNews issue now explores a different theme, usually focused around the cover story subject. Recently, SMACNews has explored the architectural sector in June and the topic of health and safety in July’s edition.

As you peruse this issue, you will notice the diversity of industries that fall within this sector. While the issue can only touch on a few, many contractors working in the industrial sector face diversity all the time. This vast sector encompasses automotive, pharmaceutical, chemical, aerospace, data centers, alternative energy, wastewater plants, and nuclear energy to name a few.

As I read through this issue—and the issues before it—I am always amazed at the innovation and forward-thinking approaches many of our members exhibit. I usually find most contractors in our industry are focused on building successful systems that deliver comfort and provide a healthy environment for people visiting or inhabiting the space.

From this issue, I am more aware of the unique perspective that industrial sector contractors have as they approach a new job. Like dust for instance. I was interested to read about the inherent dangers and complexities of industrial dust and how it could serve as fuel in the event of a fire or explosion—in fact, I have had first-hand experience in dealing with a fire in a dryer shaft as a result of the combination of several elements of the explosive pentagon (read the article to learn this term). I know the importance of installing dust collectors, knowing they can actually save lives in industrial and commercial settings. As Scott Vidimos of Vidimos Inc. in East Chicago, Indiana puts it, he likes the conversation surrounding combustible dust collectors because it positions his company as a problem-solver in addition to being a contractor.

Another sub-sector in the industrial space prioritizes technology “comfort” over people comfort. I understand that SMACNA contractors working in the data center space hear clients talking about keeping server rooms at optimal temperatures for the equipment, not the people. Servers providing huge internet connections between carriers and clients require significant amounts of reliable and effective cooling to keep them functioning 99.999 percent of the time—a guarantee most internet service providers make to their customers. HVAC contractors are more than happy to meet the demands of clients by installing higher performance systems.

Speaking of increased demands, SMACNA contractors have their own list of demands and contingency plans when it comes steel tariff issues. Contractors across all sectors have been impacted and are looking at a variety of remedies to cover sudden increases in sheet metal pricing. SMACNews has taken an in-depth look at the effects of steel tariffs on different customers including yours truly. I think you’ll find our comments spot on. Enjoy.

Sincerely,

Jack Knox
SMACNA President
Data Centers: A New Frontier for Contractors

As the business world and people's daily lives become more web-centric, internet traffic and data production are ramping up at warp speed. It's a trend that doesn't seem likely to slow any time soon.

The desire for a fully connected world has led to a myriad of new challenges for the infrastructure that supports an online lifestyle and its attendant technologies, not the least of which is the growing demand for data storage space and more sophisticated data centers. The subsequent boom in construction of data centers has created a wealth of new opportunities for HVAC and sheet metal contractors.

Data Generation Scaling Up
The business models of data centers have grown more complex. No longer does a data center serve as just a storage destination. Thanks to the cloud and advanced fiber optic technologies, data service providers offer huge bandwidth connections to companies whose business models rely on performance and convenience of connectivity.

Hyperscale online applications such as Netflix, Amazon, and Facebook are contributing to the explosion in data usage, requiring these companies to purchase storage capacity in significant enough blocks where building their own data centers make financial sense.

According to a white paper published by the market intelligence firm International Data Corp. in 2017, the “sum of all data created, captured, and replicated” around the world will reach 163 zettabytes by 2025, which is equivalent to 10 times as much data as was generated in 2016. (A zettabyte is equivalent to 1,000 exabytes, one of which is equivalent to 1,000 petabytes, one of which is equivalent to 1,000 terabytes, one of which is equivalent to 1,000 gigabytes.)

Meanwhile, the data center business has grown more sophisticated as real estate investment trusts (REITs) emerge as significant players in the sector on both a national and global level. These companies own and manage multiple sites with server space for rent, and they are responsible for some services such as the physical security of the facilities and providing reliable power supplies. Inside each data center, hundreds of customers connect to the internet or one another.

"Microsoft, Apple, Facebook—these types of companies need massive..." continued on page 12

Moving the Industry Forward With a Welcoming Workplace

With more attention being paid to discrimination and all forms of harassment in the workplace, employers are finding new and innovative ways to address unwanted behavior while creating a more welcoming workplace for all employees. This is true in the sheet metal industry as well.

As part of this rising trend in workforce-led efforts to reduce jobsite harassment, employers are focusing on revamping the training process. Previously, the emphasis was on complying with the law. Now, more employers are concentrating on the kind of culture that's acceptable in an organization. Increasingly, sheet metal contractors are ensuring that equal opportunity employment (EEO) training is done on a regular basis.

Employers have also shifted the spotlight of EEO training to ensure that "key employees are more aware of what goes on and understand that they are responsible for their crew and that they have to make sure they are treated fairly," said Angela Simon, president, Western Allied Mechanical.

A shift in company leadership and Joint Apprentice Training Centers (JATCs) is also occurring by taking more responsibility for changing the culture in their workplaces. Some JATC trustees are ensuring that instructors receive regular EEO training. A few areas are also encouraging JATCs to include time in their apprentice curriculum for apprentices to learn their rights as employees and to speak up if they witness or experience discrimination or harassment.

The next step, some employers believe, is for contractors to support worker-led efforts to address workplace harassment. This can take the form of placing attention on bystander intervention. This approach attempts to ensure that the onus isn't on the victim alone. It is the "if you see something, say something" approach.

The SMART union is advocating that its locals and jobsite leaders use the "see something, say something" approach to encourage co-workers to intervene on behalf of those "targeted" for hostility. The union is also encouraging employers to support these interventions.

At its Business Agents Conference in Florida, the SMART union told its locals' leadership about the concept of "bystander" training, and the more action-based "upstander training." This encourages others in the shop or on the jobsite to speak out when they witness hazing, bullying, and harassment. This culture of not saying anything can be rooted in such barriers to intervention as work, social, or personal obstacles, but these barriers can be overcome with a culture that supports "upstanding."

Positive change comes down to embracing a culture that believes one truth that outweighs any other factor, "that the individual on the job is the best person for the job," said Karen Fox, president, Precision Air Balance. "The industry needs to be open to the awareness that anyone can excel if one puts his or her mind to it. Workers just need the opportunity to show what they can do."

Companies that embrace these attitudes will be leading the industry forward with a rich and diverse workforce.
St. Louis Contractor Takes ACM Panel Fabrication into Own Hands

When a Jeep dealership contacted Todd Berg of Architectural Sheet Metal Systems Inc. (ASMS) of St. Louis, Missouri, Berg was quick to respond. The owner of Lou Fusz Jeep in O’Fallon, Missouri, was looking to install a sleek exterior to enhance the façade of the dealership and Todd knew he could help.

After several client meetings, ASMS offered their own solution and fabricated and installed their own ACM (aluminum composite material) and MCM (metal composite material) panels to create a sleek exterior look for the Lou Fusz Jeep dealership.

The panels consisted of Alpolic 4MM PE Core Anthracite Grey, Harvest Trail Bamboo, and HPA Silver. Similar panels have an outer skin of aluminum or metal (such as zinc, copper or stainless steel) over a plastic or fire-retardant core. They are used on “high-end commercial buildings,” according to ASMS president Todd Berg, “for a contemporary look for businesses such as car dealerships, banks, and hospitals.”

Saving time and improving project turnaround was the main incentive for the decision to fabricate and install their own ACM and MCM panels, Berg said. The typical lead time from outside manufacturers is four to 10 weeks, but “when we do this ourselves, we can have panels in one to two weeks. If you would like to control your schedule, it’s well worth making your own,” he added.

This project illustrates the options a contractor has when faced with weeks or months to receive a delivery of similar panels needed for a project. “You can save time by making them yourselves.”

On the Jeep project, “we installed the panels in a rainscreen system (dry joint) with route and return legs attached to extruded mounting hardware,” Berg said. That reduces the need for caulking, which increases efficiency and reduces leaks around joints.

As fire-rated products, the panels also have safety as well as cosmetic advantages. The finish also has a 35-year warranty.

While successful, bringing fabrication in-house was an expensive, but strategic proposition: “We had to add a building and purchase an AXYZ machine,” Berg said. Training and personnel added to the equation. “We were lucky to have employees who were fluent in AutoCAD (2-D and 3-D computer-aided drafting software, but had to provide more training to be able to actually make our own panels. It probably cost us around $200,000 to start from scratch.”

The strategic investment has been a profitable move for ASMS, enough so that “we just bought a second machine at $150,000,” said Berg.

By bringing fabrication in-house, “we are starting to lure our competitors to buy from us instead of non-union shops,” said John Hyde, CEO of Architectural Sheet Metal Systems. Berg added that “since we’re using trained union sheet metal workers to draw, fabricate, and install, we think we have a better product.”

As the only Local 36 contractor currently making their own ACM panels, ASMS is in an enviable market position. They offer competitive pricing on the panels to other Local 36 contractors and sell to some area customers (selling the panels out-of-town is not feasible, due to the cost of transport). The potential for saving time and increasing efficiency has led Local 36 to encourage other contractors to consider fabricating their own panels.

ASMS’s decision to make their own panels and Local 36’s support reflects a national SMART union trend to expand ACM and MCM paneling fabrication by sheet metal contractors. SMART will subsidize training and help contractors pay for necessary equipment.

“There is a real need for this. Customers had been complaining for years about having to wait for panels, and we saw an opportunity,” said Hyde. “Only about 5 percent of union contractors nationally fabricate their own panels at the moment, so there is a lot of market available.”
ADJ Scores Big with D.C. United’s New Soccer Stadium

ADJ Sheet Metal Inc. met a fast-paced deadline and installed all the sheet metal work for the first stadium devoted to the renowned D.C. United soccer team.

In July, D.C. United, the most decorated franchise in U.S. soccer history, began playing at Audi Field. The brand-new soccer stadium is located just two blocks away from the Washington Nationals Baseball Park in the fast-developing Capitol Riverfront area of Washington, D.C.

The team had been waiting for a stadium of its own for years, and once construction got started, things moved along quickly. From ground-breaking in February 2017 to opening day on July 14, 2018, the project took less than 17 months to complete.

ADJ Sheet Metal Inc. of White Plains, Maryland, performed the sheet metal installation for the entire project. The work included installing black iron kitchen exhaust systems and makeup air systems in the concession stands, stainless steel welded dishwasher exhaust duct work, and aluminum duct in the shower and locker rooms.

ADJ also installed variable air volume (VAV) boxes, rooftop units, and sound attenuators, while also installing sheet metal work in meeting rooms and offices.

The project made use of building information modeling (BIM) coordination and it was a design/build project with Limbach Mechanical (also a SMACNA member) and Pro Air Mechanical.

Because ADJ was working for two separate contractors, they broke the work up into two sections. Mike Doerk, ADJ executive vice-president, was project manager for the south and western part of the structure, while his colleague, Ray Sprouse, project manager, managed the north and east end.

ADJ was awarded the job late in the project, Doerk noted, so the pace of the installation had to move quickly.

“We had to work quite a bit just to keep up with the pace of the project,” he said. “When we were awarded the project, the structure was already being built. At certain times, we probably had anywhere from 10 to 15 guys on the project while having to coordinate with all the other trades.”

The biggest challenge ADJ faced was the deadline itself. “The challenge was the combination of the pace of the project and trying to meet a completion date so the stadium itself was ready for opening day,” Doerk said. “Concession stands and ductwork had to be complete so they could actually cook in all the concession stands while work continued. The trades were definitely stacked in there quite a bit.”

Doerk said the project required “a complete team effort to get it done.” He and Sprouse relied on the expertise and support of their field foreman, vice president of estimating, BIM draftsman/coordinator, and company president.

This was the first stadium Doerk was involved in, and he’s always wanted to work on an arena, but he admits, “at the end of the day, it was a ductwork install.” It wasn’t typical, though, especially the concession areas. Installation took place in some extremely tight spaces.

In addition to serving as the home of D.C. United, Audi Field will host sporting and cultural events, concerts, and community activities. The stadium boasts 31 luxury suites and 500,000 square feet of mixed-use retail and residential space.

For ADJ, the job may have been business as usual, but most of ADJ’s sheet metal work isn’t seen by 20,000 excited soccer fans all at once.

Regardless of visibility, Doerk is proud of his team’s work. “When we finished, we walked off the job and there was very little left to do—not much in the way of punch-list items,” he noted. “I know when I ride through Washington, D.C., with friends and family, I will surely point out that we did the sheet metal work in that stadium.”
Taking a Look at High Efficiency Systems

High-end HVAC systems known for their energy efficiency include geothermal, solar, High Performance Air Systems (HPAS) and variable refrigerant flow (VRF) systems. Although these new technologies can be very expensive to install, over the life of the systems, they can result in big savings for the customer.

These non-traditional heating and cooling methods are moving steadily from the commercial side of the business into the residential market, offering homeowners the benefits of comfort, energy efficiency, cost savings, and tax credits. To residential contractors, these emerging market sectors might present new opportunities to expand market share and service contracts.

According to the U.S. Environmental Protection Agency, geothermal systems are energy efficient, environmentally clean, and cost-effective space conditioning systems. In Plainfield, Illinois, Ken Wiesbrook of Wiesbrook Sheet Metal Inc. and president of SMACNA Greater Chicago, has installed several residential geothermal systems.

“The majority of our geothermal customers are in the city, so they use the vertical loop system, often locating wells under a driveway” Wiesbrook said. “One customer with a farm house dug his own trenches, and we installed a horizontal loop system. Another customer has a high-end home on a lake with eleven HVAC units and closed coils running out into the lake—the geothermal system even heats the swimming pool.”

Design flexibility is needed for colder climates. “Today’s geothermal systems include two-stage and variable speed technology, which offer the design flexibility needed, especially in northern states where the heating BTU capacities required are much greater than the cooling BTUs required. The two-stage and variable systems are more efficient and provide better comfort,” said Hank Artlip, president of Artlip and Sons, Aurora, Illinois, who specializes in installing geothermal systems.

High efficiency systems with variable speed compressors also provide energy savings. By eliminating short-cycling, two-stage and variable speed compressors provide energy savings that can also benefit customers with conventional systems. Jeffrey Laski of S and M Heating Sales Co. in Southfield, Michigan, installs many high efficiency systems.

“A single stage compressor can leave warm spots in the home because the compressor frequently turns on and off, satisfying the thermostat too quickly,” he said. “Variable compressors run continuously at a lower tonnage, providing more even temperatures. These results don’t go unnoticed by the customer as ‘we’ve received testimonials from them saying they have never been so comfortable in their homes.’

Variable refrigerant flow (VRF) is another new technology that is moving from the commercial to the residential market.

When Russell Kimball purchased Evergreen State Heat and AC in 1998, the business mix was about 80 percent sheet metal and 20 percent service/line-set pipe-wire-fire. Being located in the Pacific Northwest, twenty year later the company has completely reversed this business mix as local customers adopt ductless Variable Refrigerant Flow (VRF) systems.

“VRF systems use electronic inverter technology to change AC to DC power with an amazing reduction in amperage needs and have up to eight indoor heads per outdoor unit. They even have the ability for some heads to be heating while others are cooling,” Kimball explained. “We now do over 80 percent pipingfitting and service and under 20 percent sheet metal fabrication and installation by union labor hours.”

Kimball encourages contractors to master new technologies. “If you work through VRF wholesalers, they will teach your sales force how to explain the advantages to customers. You can even request free VRF training units for your JATC, so your service personnel understand the latest equipment,” he explained.

Many utilities also offer rebates to help customers with the initial costs of high-efficiency systems. Because of the high installation cost, Artlip helps homeowners find every tax break. “We assist with the paperwork and provide the documentation for any tax breaks or rebates,” he explained. “Our customers receive installation rebates through SMART and equipment rebates through manufacturers. Geothermal systems also qualify for a federal tax credit.”

Each of these technological advances offers members opportunities to strengthen their businesses.

“We have made big changes at Evergreen State Heat and AC to adjust to shifting customer demands,” Kimball concluded. “Each of these technological advances offers members opportunities to learn about the systems and possibly incorporate the service to strengthen their business diversity.”
Collecting Combustible Dust Can Sweep Open Doors

Combustible dust can be an underestimated hazard in the workplace—but installing dust collection systems for the industries that work with these fine dust particles can also be a smart business opportunity for sheet metal contractors. Combustible dust is a minute material that—when suspended in the air in the right concentrations and under the right conditions—can become explosive. Combustible materials exist in such industries as agriculture, granaries, food processing, sugar refineries, manufacturing, furniture, fossil fuel plants, recycling, and metal working. This dust includes such diverse materials as sugar, spices, flour, feed, grains, tobacco, plastics, wood, paper, rubber, pharmaceuti-
cals, coal, and metals.

“Good housekeeping is the best way to avoid an explosion caused by combustible dust,” said Scott Vidimos, president of SMACNA member company Vidimos Inc. of East Chicago, Indiana. “We perform dust collection work and have to incorporate safety devices into systems to address the hazard.” A combustible dust collection system is an effective way to provide this housekeeping.

“When a change in pressure is sensed in the duct or equipment, bottles installed on the ductwork discharge a suppressant within milliseconds to suppress an explosion,” Vidimos explained. His company installs dust collection systems as well as devices related to explosion suppression, explosion venting, and preventing an explosion from traveling back through the duct system.

For dust to combust, five elements, in what’s known as the “explosive pentagon,” must be present: fuel (dust), oxygen, an ignition source, a confined or enclosed space, and dispersion (the mixing of fuel and oxygen).

“You could be in the middle of a huge explosion without warning,” noted Randy Krocka, administrator of the Sheet Metal Occupational Health Institute Trust and a person who is keenly aware of the dangers of combustible dust. “It’s the secondary explosions that can be the worst. When the first explosion happens, it rocks the building, causing all the dust in the rafters and everywhere else to fall. This creates an explosive pentagon for secondary explosions.”

Vidimos notes that while many industries are aware of the dangers of creating potentially explosive conditions when handling their products, others are not. “Some fortunately have not experienced any disasters, but it may be more a matter of luck than of good engineering design,” he said.

“Dust collection systems can also be installed in plants that do not necessarily present the potential for explosion,” Vidimos said. “Dust collection can also be used to reclaim product that escapes the process, as well as for housekeeping and to provide a safe working environment for employees.”

In Vidimos’ experience, dust collection is always “a balance between functionality and practicality.” Though it’s ideal to collect dust at the source, the facility’s operations and maintenance also factor into the installation decision. Vidimos credits SMACNA’s Technical Resources Department for their technical expertise and guidance. “The systems involve design outside of normal duct design and they helped us assess the various scenarios. The largest difference from normal duct design/fabrication is that explosions introduce a rapid change in duct pressure that isn’t contemplated in normal duct design.”

Dust collection can be a worthwhile business for sheet metal contractors. “Knowledge of dust collection design and the ability to fabricate and install these systems can open a lot of doors for business opportunities,” Vidimos said. “Adding the ability to sell explosion suppressant or venting systems may involve partnering with manufacturers of those products. It puts the sheet metal contractor in the position of being a problem-solver for their customers.”

The National Fire Protection Association developed NFPA 654 Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids. This standard is a good safety resource for e2contractors and offers safety measures to prevent and mitigate fires and dust explosions in facilities that handle combustible particulate solids.
continued from page 1

This time, however, tight supplies since the U.S. instituted tariffs on almost all foreign steel turned a routine order into an international pain, said Bill Giffin, a vice president and partner at Giffin Sheet Metals.

“It’s gone crazy,” Giffin said. SMACNA members like Giffin are among those impacted by President Donald Trump’s March 1 decision to impose a 25 percent duty on imported steel and a 10 percent levy on aluminum. Even though many SMACNA members and machinery manufacturers say they purchase domestic metal almost exclusively, the boost in the price of imported steel quickly had an effect on costs from U.S. suppliers, many members say.

In Giffin’s case, he was forced to buy from a company he didn’t have a history with. The supplier forced terms that Giffin said were worse than c.o.d.: “Cash before leaving their yard.” The company was required to wire payment before it could take possession of the steel.

Giffin is not a supporter of the tariffs. “It’s impacting us, it’s impacting our industry in general,” he said. “It’s very volatile right now.”

Rationale

Trump used his authority under Section 232 of the Trade Expansion Act, a 1962 law that few had heard of before the tariffs were announced. It gives the president the power to impose tariffs if the Commerce Department determines they’re needed to ensure national security. Because steel and aluminum are widely used in military equipment, the White House said a strong domestic industry is vital for U.S. defense.

American steel manufacturers have long complained that some countries sell steel in the U.S. at a price lower than it sells for where it’s made—a practice known as dumping. Steelmakers blame dumping for contributing to the decline in the domestic steel industry in the last 50 years. Most support the tariffs.

“For far too long, steel imports have been allowed to undermine America’s steel strength,” United States Steel Corp. President David Burritt said shortly after the tariffs were announced. “Our national security is only as strong as American steel. President Trump’s action will begin to level the playing field for the security and manufacturing strength of the United States.”

Not everyone who uses the steel put out by domestic manufacturers agrees, however. Several U.S. manufacturing associations, including the Air-Conditioning, Heating and Refrigeration Institute, have criticized the tariffs. Among SMACNA members and suppliers, opinions vary from support and neutrality to strong opposition.

Survey Says....

The companies that make up SMACNA’s Georgia chapter recently took part in a survey on the steel tariffs. Chapter Executive Vice President Ginger Slaick said members reported price increases ranging from 3 to 60 percent, depending on material.

“They (are) seeing increases anywhere from 20 to 40 percent on stainless steel and up to 35 percent on galvanized and up to 50 percent on aluminum,” said Slaick, reporting what two respondents, who asked to remain anonymous, said.

Such price increases are affecting profits, she added. “For the most part, they’re not able to pass it on to their customers,” Slaick said.

Cleveland-based distributor and SMACNA Silver Associate Member Majestic Steel USA said it counts many SMACNA members among its client list. Company officials there said the price increases have generally been what they expected, but they acknowledged that getting a hold of certain types of metal can be difficult.

“We’re seeing demand extremely strong in all of our markets throughout the country,” said Rob Zito, Majestic’s HVAC market manager.
Unfortunately, the tight supply situation won’t change anytime soon, said Majestic Market Research Manager Chris Billman. The tariffs have reduced the amount of imported steel in the market, and many domestic mills are running at close to full capacity. Adding additional steel processing facilities takes time.

“For now, Zito and Billman both recommend sheet metal contractors ensure they have good relationships with their vendors. “From a mechanical contractor perspective, they need to stay up-to-date with the factors going on,” Zito said. “They need to get updates weekly or biweekly from their steel suppliers to make sure there are no changes going on in the supply chain.”

Price Hikes
But solid relationships with vendors don’t make up for excessively large price increases, according to Jack Knox, current SMACNA president. American Steel Manufacturers have long complained that some countries sell steel in the U.S. at a price lower than it sells for where it’s made—a practice known as dumping. Major Dates in the Steel Tariffs Saga

March 1: President Donald Trump announces on Twitter that the U.S. will soon impose a 25 percent tariff on imported steel and a 10 percent tariff on aluminum in an effort to help American steel makers he says have been hurt by foreign producers such as China.

He uses his authority under Section 232 of the Trade Expansion Act, a 1962 law that gives the president wide latitude on trade issues that the White House says impact national security.

March 8: Trump signs the tariffs into law, temporarily exempting Canada and Mexico while the administration tries to renegotiate the 24-year-old North American Free Trade Agreement. The European Union (EU) says it will put similar tariffs on $3.5 billion in U.S. products if the trading bloc is not exempted. A temporary exemption is granted two weeks later.

April 1: China releases a list of 128 popular American products it plans to hit with tariffs ranging from 15-25 percent in response to the steel tariffs.

April 3: The U.S. puts out a list of 1,300 Chinese products it may hit with a 25 percent tariff. The products include HVAC parts. The next day, China says it may retaliate with new tariffs on $50 billion in American products, many of which are agricultural.

May 3: A bipartisan pair of Midwest senators sends a letter to the White House, asking Commerce Secretary Wilbur Ross to explain the rationale for the tariffs. Sens. Ron Johnson (R-Wis.) and Claire McCaskill (D-Mo.) say the answers they have been given so far are incomplete.

June 1: Unable to reach an agreement with the EU, Canada, or Mexico on trade, the U.S. applies its steel and aluminum tariffs to the close allies and trading partners. All countries promise to retaliate with tariffs on American goods.

June 27: A group of imported steel-using companies files a lawsuit seeking to have the tariffs declared unconstitutional. The American Institute for International Steel says Section 232 of the Trade Expansion Act is unconstitutional as well.

July 1: Tariffs on U.S.-made bourbon and a number of food products go into effect in Canada. The move follows weeks of failed negotiations between the two countries to exempt America’s northern neighbor from the steel and aluminum tariffs.

July 6: $34 billion in American exports are now more expensive in China, thanks to tariffs imposed by the Chinese government. The tariffs match similar levies imposed by U.S. on Chinese goods. China’s tariffs hit America’s soybean farmers especially hard—China is a top market for U.S.-grown soybeans.

July 24: The White House announces $12 billion in aid to farmers hurt by the trade war started by the steel and aluminum tariffs.

July 25: Trump and European Commission President Jean-Claude Juncker announce they will work to bring an end to the steel and aluminum tariffs that have frayed relations between the U.S. and the 28-nation EU. No timetable is given.
Steel Tariffs

Some companies are reluctant to criticize the White House’s decision to enact the tariffs, preferring not to take a position on a controversial policy. Knox is not among them.

“I’m a Trump supporter, but I am absolutely opposed to this tariff,” he said. “I understand the long-range goal. I get that. But the short-term effect it’s had on contractors like myself? It’s going straight to the bottom line, taking away from net profits that are critical to keep a business going. Right now, it hurts.”

Feeling No Pain

But not all SMACNA contractors are feeling an impact from the tariffs. Craig Pessina, president of Partlan-Labadie Sheet Metal Co. in Oak Park, Michigan, said his firm hasn’t noticed much of a change. Pessina said he typically buys flat sheets of steel, not coils, along with lots of other types of metal, and he hasn’t experienced the price fluctuations some other contractors are complaining about.

“I believe that our relationships with our steel suppliers are very solid,” said Pessina, who serves on SMACNA’s Industrial Council. “They give us a lot of forewarning if there’s going to be a small fluctuation or any fluctuation at all. “We’re not finding thus far that the steel tariffs are affecting our business,” he said.

Pessina estimated that Partlan-Labadie purchases between 200,000 and 400,000 pounds of steel a year—all of it from domestic suppliers. He said many have cut the length of time that they’ll guarantee a quote from a month down to 15 days.

Personally, Pessina said he doesn’t have an opinion on Trump’s efforts to punish countries such as China that the White House believes take advantage of the U.S., although he acknowledged he doesn’t like to see steel prices rise. With a heavily automotive client base, Pessina said he is concerned that the White House is mulling tariffs on imported car parts, since many U.S.-built vehicles contain materials sourced around the world. Such a levy could affect his company more than the current duties on steel and aluminum, he said.

Going With the Flow

Charleroi, Pennsylvania-based DMI Cos. uses steel in just about everything it sells under four HVAC-related brands: Ductmate Industries, GreenSeam Industries, Linx Industries, and Aire Technologies. Company President and CEO Ray Yeager estimates it buys “tens of millions of dollars of steel” annually. He estimated that in many cases, prices have increased more than the 25 percent tariff on foreign steel.

“Our costs have gone up on galvanized a significant amount,” Yeager said, pointing out that DMI seldom uses foreign steel.

Unlike some companies, Yeager said DMI hasn’t had any difficulty getting the materials it needs—as long as they’re willing to pay current prices. At his company, Yeager said he hasn’t had much pushback passing along price increases to distributors who presumably raised prices for their contractor customers.

“Everybody pretty much understands what’s going on,” he said. “I think we might have had one distributor that said, ‘Come on guys. You’re really going up?'”

Yeager said DMI doesn’t take a position on the tariffs. He wasn’t too worried about a steel supply shortage and said the tariffs are part of Trump’s negotiating strategy to improve America’s position in global trade.

“That’s why we didn’t go overboard and buy a year’s worth of inventory,” he said.

About 300 miles away from DMI in Lester, Pennsylvania, Ernest D. Menold Inc., does heavy industrial and commercial HVAC, and duct fabrication in Pennsylvania, Delaware, and New Jersey. Like Yeager and many SMACNA members, company President Ernest J. Menold, P.E., is seeing higher prices on almost everything since the tariffs were announced. Aside from a slightly longer schedule for deliveries, Menold said his business, which does a lot of “quick turnaround” projects, isn’t suffering. But he does have some questions about the impact of the tariffs.

“The only thing that concerns me is domestic prices are going up,” he said. “You would figure if we’re only taxing imported goods, why is the domestic price going up? Is it because the market will bear it?”
Prevent Injuries: New Materials Handling Guide Available

Most projects and tasks, both on the jobsite and in the shop, involve handling materials by manually lifting, pushing, pulling, twisting, carrying, and holding a wide variety of materials, tools, and equipment.

SMACNA has developed a new guide to help members prevent the injuries related to these movements. SMACNA's new Manual Materials Handling Program is a written model program that includes roles and responsibilities, risk factors, means of prevention, a matrix of material handling equipment, sample checklists, and ten Toolbox Talks for training employees.

“It is imperative that companies review their material handling policies and programs as part of an effective safety culture,” said Mike McCullion, SMACNA’s director of market sectors and safety. “The injuries related to material handling can often include significant workers compensation claims due to musculoskeletal injuries to the back, neck, joints, tendons, muscles, and more.”

This new guide can help prevent these injuries before they happen. The model written program can also be customized and edited to match a company’s safety culture beliefs and goals. It provides practices and procedures that can protect workers from the pain involved in these injuries, the negative affects on productivity, and the increasing costs of related medical care.

Members can receive a free copy of SMACNA's Manual Materials Handling Model Program on the Model Programs section of SMACNA's Safety webpage.

SMACNA’s Wage and Fringe Manual Now Searchable Online

SMACNA has updated and expanded its Wage and Fringe Manual into an electronic database to help contractors and chapters access wage and fringe information and compare benefits more easily.

“The new database will make searches much easier for members looking for wage and fringe information by state, local union, chapter, and collective bargaining area,” said Joye Blanscett, SMACNA’s director of labor services and human relations. “The new database also lets chapters review and update their area’s wage and fringe information electronically which helps SMACNA ensure that the most current information is available.”

SMACNA’s Wage and Fringe Manual database tracks journeyman wage and fringe benefit information for approximately 100 local union areas. This information can be useful to contractors looking at bidding in areas outside their home local when they may not have the other area’s wage sheets.

Many bargaining committees use the database to understand how their rates compare to surrounding areas or similar areas outside their region. Updated bi-annually, the manual also includes regional and national averages on wages and at least four key fringe benefits found in local collective bargaining agreements.

The manual is available to chapters and members on SMACNA’s members-only Labor Relations webpage at www.smacna.org/labor.

SMACNA Seeks Golf Sponsors for Scholarships

Each year at SMACNA’s Annual Convention, members who love a good game of golf head out to the links for a friendly round of golf to raise scholarship funds for the College of Fellows. So far, the College of Fellows has raised monies to help more than 100 students fund their college tuition.

SMACNA’s College of Fellows Golf Outing continues its tradition during this year’s 75th Annual Convention at the La Costa Champions Golf Course in San Diego, California, on Sunday, October 14. SMACNA chapters and members are encouraged to sponsor the golf outing as the fees go directly to the scholarship fund.

A variety of sponsorships are available for golf-related activities like breakfast, golf course beverage carts, coffee stations, and bus transportation. On the course, in addition to sponsoring specific holes, sponsors can also fund competitions such as closest to the pin, longest drive, most accurate drive, and longest putt. A lucky golfer could win $25,000 for a hole-in-one.

Participants can see the complete list of sponsorship opportunities on SMACNA’s Golf Outing web page as well as sign up using the sponsorship form located at smacnews/2793f.

For questions, contact Heather Frank (hfrank@smacna.org / (703) 995-4045) or Jason Watson (jwatson@smacna.org / (703) 803-2981).

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**LEGISLATIVE**

**Reps. Fitzpatrick, Gottheimer Visit Pennsylvania Shop**

Reps. Brian Fitzpatrick (R-8th-Pa.) and Josh Gottheimer (D-5th-N.J.), both strong supporters of the sheet metal industry, recently toured the shop of SMACNA contractor Prime Sheet Metal Inc. of Warminster, Pennsylvania.

They discussed industry jobs, apprenticeships, and training with Dominic Bonitatis, owner of Prime Sheet Metal Inc., and vice president of SMCA of Philadelphia and Vicinity. The press conference was sponsored by the Sheet Metal Contractors Association of Philadelphia and Vicinity.

Along with Congressional staff and photographers, Tom Bush, business representative from SMART Local 19 attended, as well as members of the International Brotherhood of Boilermakers and International Brotherhood of Electricians.

“Everybody was impressed that the Congressmen would visit and take the time to answer questions and listen to our opinions,” said Jim Shields, communications director, SMCA of Philadelphia and Vicinity.

“Both Congressmen seem to be genuinely concerned with doing the right thing,” he said. “They were very interested in talking to Dominic Bonitatis of Prime Sheet Metal Inc. and SMCA Executive Director Bill Reardon about what apprentices make as they progress through their training. The tour made an impression.”

Reps. Fitzpatrick and Gottheimer are members of the bipartisan Problem-Solvers Caucus, which works to increase bi-partisan cooperation and develop a culture of trust in Congress.

**Data Centers**

__continued from page 3__

expansion of server space to accommodate what they do,” says Guy Gast, president of the Iowa division of The Waldinger Corp., a mechanical, electrical, and sheet metal contractor based in Des Moines, Iowa, that works on data center development projects.

There are five publicly listed U.S. data center real estate investment trusts (REITs) with a combined equity market capitalization in excess of $70 billion, according to Nareit, an industry trade association: CoreSite Realty, CyrusOne, Digital Realty Trust, Equinix Inc., and QTS Realty Trust. They control roughly 35 percent of the global market share of data centers, according to real estate management firm JLL. Nareit data indicates the number of REIT-owned data centers ballooned from approximately 50 in 2006 to more than 230 a decade later. In addition to this growth, companies such as Google, Facebook and Amazon are building their own exclusive data centers across the country.

Not surprisingly, the combination of accelerating demand and an influx of large-scale capital have resulted in the rapid expansion of data center development pipelines. A 2018 analysis by JLL determined that nearly 400 megawatts of data center space are under construction in North America, Europe, and the Asia-Pacific region.

**Size Matters**

Lane Anderson, vice president for data center development with QTS Realty Trust, a provider of hyperscale and hybrid colocation, describes data center development as “MEP-intensive” relative to other types of commercial building. “It’s the only architecture that’s built for machines, versus a facility built for people to operate inside.”

What are data center developers looking for in their contracting partners? It goes well beyond just price. First and foremost, QTS is looking for a demonstrable track record of quality work in the data center space, according to Anderson.

“It always starts with well-honed systems for the contractors,” he says.
“The prime mechanical contractor needs to have a lot of data center experience for a larger project.”

Size and resources are viewed as major keys. Those factors have been emphasized as commissioning and quality control take on greater importance to clients, according to Gast. “There are a lot of pre-qualifying traits that are different from the conventional bid-and-get markets,” he says.

QTS evaluates the workforce limitations of potential partners, according to Anderson. That goes for the number of hands on deck, as well as training and retention.

“We do routinely look at [a potential contractor] and say, ‘I like everything about you, but you may be too small for this job. You don’t have enough retained staff,’” Anderson says. “Typically, once a project starts for us, it doesn’t get smaller, it gets bigger. We don’t want to be 100 percent of a contractor’s capacity. That is not very intelligent.”

Martin cites the need for contractors with the ability to build a “modern and scalable data center” that can work outside the beaten path. “They are looking for companies with depth in both their design and field teams who can support projects outside of main population centers,” Martin says.

High Velocity of Change

Just as technology is evolving, the requirements for cutting-edge data centers are constantly changing as well.

As developers look to grow the amount of data center space available, attention is beginning to shift to innovations in design and usage. Looking ahead, “we can expect to see significant resources dedicated to innovations ranging from efficient cooling systems and servers up to optimized IT functionality and load adjustment,” according to JLL.

“They are continuously improving and upgrading the hardware and components of heating and cooling systems that support data centers,” says Gast, who notes that the high degrees of reliability required of data centers necessitate detailed maintenance and upkeep on an ongoing basis. “They have to work flawlessly forever.”

Contractors are already learning how to deal with these constantly emerging challenges. For example, Martin points out that underfloor cooling systems are falling out of favor with data center owners. That means developers are looking for mechanical systems contractors “with a track record in using more exotic systems that can match the demands of the facility if and when it grows,” he says.

All in all, the business of building data centers won’t get any less complex any time soon. “You’re aiming for a future target and designing for a facility down the road that could utilize technology that hasn’t been invented yet, and it could house clients that work in different industries with different demands,” Martin says.

The second half of the forum will focus on the automotive industry. Robert Shearer of KBD Technic will share several automotive industry ventilation projects including the evaluation of a VOC emissions control system, an engineering study of an automotive manufacturing plant, and a specification design of an oil mist control system.

The Industrial Forum will include a question and answer discussion segment with members of the SMACNA Industrial Contractors Council Steering Committee.
Progressing from Project Manager to Project Leader

Immersing project managers in the challenges of running a complex sheet metal project and using “hard skills” like thinking strategically, understanding financials clearly, and managing project scope are all part of the curriculum for SMACNA’s Advanced Project Managers Institute, Oct. 7-10, in Raleigh, N.C.

“Participants will learn how to proactively manage and resolve complicated project issues more effectively because they will practice these skills during the program,” said Andrew Patron, senior consultant with FMI. Patron teaches the Project Managers Institute and developed this advanced course specifically for SMACNA.

The course will use real-world simulations and industry-specific exercises that replicate the challenges of managing a sheet metal project and address many of the key operational aspects and complexities that contractors face today.

Working in teams, participants will build on their skills by developing different approaches to leadership and management, project tracking, site logistics, how to manage billings and cash flow.

Designed for project managers with two or more years of experience and graduates of the Project Managers Institute, participants will also learn mentoring, conflict resolution, meetings, negotiations, and change order management.

To improve their leadership approach, the course also offers individual performance feedback and coaching. “Self-awareness and objective personal feedback are helpful to improve leadership and management effectiveness,” Patron said. “Participants will leave with a personal action plan for implementing what they’ve learned when they return home.”

SAFETY

2018 Safety Survey Profile Statistics Now Available

Each year, SMACNA’s Safety Excellence Award Program attracts a rich collection of entries from many qualified safety programs. A byproduct of these submissions is that SMACNA collects important safety and health data, which in turn becomes SMACNA’s Safety Statistics Profile.

This year submissions increased by 22 percent, setting a record number of respondents to SMACNA’s 2018 Safety Survey. The results of this year’s study are compiled in SMACNA’s detailed 2018 Safety Statistics Profile, now available on SMACNA’s Safety web page.

Highlights of this year’s key findings include:

• The reported average OSHA incidence rate was 2.25. An OSHA incidence rate is a mathematical calculation of recordable injury and illness incidents per 100 full-time employees during the year. While it is slightly higher than 2017 (2.22), it still reflects the very low incidence rates of members’ successful safety programs compared to the industry average (>5.00).

• The average reported Experience Modification Rate (EMR), the insurance industry measure of injury and illness occurrences, was .79, an improvement over last year and on par with historically low EMR results from prior survey years.

• SMACNA started recording lost workday cases in 2013 to evaluate the severity of injury and illness cases. This year, the average lost workday case was 0.97, which was the lowest in three years.

• The findings of a combined low EMR and low lost workdays indicates that most cases do not result in significant time away from work.

• As in prior years, 99 percent of contractors reported that they have written safety and health programs and that most conduct regular safety inspections and use Toolbox Talks during weekly safety training sessions.

• In addition, OSHA 30-hour training is growing in popularity as 60 percent of companies reported providing this level of training, an eight percent increase over last year (52 percent). This is not surprising as more owners and general contractors are looking for a highly trained workforce.

• Once again this year, drug and alcohol polices proved important to safety and health programs’ success. Companies without such policies had a 39 percent higher OSHA incidence rate than companies that did have drug and alcohol programs.

Winners of the United States and Canadian Safety Award Programs were announced earlier this month. First-place winners will be recognized at SMACNA’s 75th Annual Convention in San Diego in October.

SMACNA is grateful to all the members who participated in the 2018 Safety Excellence Award Program. For more information, contact Mike McCullion, director of market sectors and safety, (mrmccullion@smacna.org / (703) 995-4027).
Welcome New SMACNA Members

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<td>Atlas Metal Pros</td>
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<td>BR Productions Inc.</td>
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<td>Daily Heating and</td>
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<td>Dekalb Mechanical East</td>
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AT THE CONVENTION

Learning to Fine-Tune One’s Leadership Presence

Leadership presence is the intangible that can make a clear difference for long-term personal and professional success.

SMACNA’s Women in Construction Leadership Council is bringing a much-anticipated session to the convention this year titled “Fine-Tuning Your Leadership Presence by Aligning Your Competency with Your Confidence.”

“This interactive session will provide a framework for participants to align their competencies in their work, to internalize their success and externally communicate it,” said Carol Vernon, a certified executive coach who has worked with more than 1,000 women leaders at the World Bank, U. N. Foundation, U.S. Chamber of Commerce, and others.

“One these elements are truly aligned,” she said, “individuals can demonstrate their strongest leadership presence through their words, voice, and body language as well as their actions to meet and even exceed their goals.”

Vernon will explain how her four-step framework of the “four Rs” including reputation, relationships, results, and resiliency, supports this alignment. Participants will learn how to use the framework for ongoing success and will take home action steps they can use to create their own stronger leadership presence.

Welcome 2018 Associate Members

PLATINUM

GOLD

SILVER

SMACNA welcomes new Silver Associate Members Building Start of Sioux Falls, South Dakota, and Pinnacle Infotech Inc. of Houston, Texas.

Being a SMACNA Associate Member increases your visibility and opportunities to engage SMACNA members.

To learn more about becoming an Associate Member, visit smacna.org or contact Scott Groves at smacna@naylor.com.
SMACNA CALENDAR

SEPTEMBER 2018
Sept. 9-11
NJAB
Minneapolis, Minnesota

OCTOBER 2018
Oct. 7-10
Advanced Project Managers Institute
Raleigh, North Carolina

Oct. 14-17
Annual Convention
San Diego, California

DECEMBER 2018
Dec. 2-4
Council of Chapter Representatives
Miami, Florida

Dec. 4
Industry Fund Seminar
Miami, Florida

JANUARY 2019
Jan. 27-29
Chapter Executive Institute
Austin, Texas

FEBRUARY 2019
Feb. 24-26
Safety Champions Conference
Tempe, Arizona

MARCH 2019
March 3-7
Business Management University
Tempe, Arizona

March 12
Collective Bargaining Orientation
Dallas, Texas

March 14-15
Association Leadership Meeting
Dallas, Texas

MAY 2019
May 7-9
2019 CEA National Issues Conference
Hyatt Regency, Washington, D.C.

May 10
Safety Surveys Due

May 19-22
Financial Boot Camp
Tempe, Arizona

FUTURE SMACNA CONVENTIONS
Oct. 14-17, 2018
75th Annual Convention
San Diego Marriott Marquis and Marina, San Diego, California

Oct. 20-23, 2019
76th Annual Convention
JW Marriott, Austin, Texas