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Cover photo courtesy of Vestergaard Company



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Change is Good

To keep up with our company's growth, our staff is taking on exciting new roles.

have always taken the approach that change is good.

Last June, our publications were purchased by Endeavor Business Media. That was our first change. Then as the year went on, our company continued to acquire more and more properties in different industries.

All of these changes allow us, as a publishing company, to offer more ways to reach industry professionals on many different platforms, whether that be print magazines, digital platforms or live events. And with our increased company portfolio there comes staff additions and changes.

Beginning Jan. 1, I have taken on the role of Group Publisher of the Endeavor Aviation Group which includes *Airport Business*, *Aircraft Maintenance Technology* (AMT) and *Ground Support Worldwide* magazines as well as AviationPros.com and the International GSE Expo.

Lester Craft, who previously served as publisher of *AMT* has taken on more responsibility as Vice President/Group Publisher within Endeavor Business Media. Additionally, GSE Expo show director Sue Ralston has been promoted to Vice President of Event Operations within the company.

We have also added a new assistant editor for our group, Walker Jaroch and we welcomed Fred Ferris to the *AMT* sales force as a national accounts manager.

We as a group are excited for 2019 and we look forward to our continued growth within the industry. See you all at the next event!

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*Winner will be contacted by Ground
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► Upcoming Events

Feb. 27-March 1
inter airport South East Asia
Singapore, Singapore

March 12-14
IATA World Cargo Symposium
Singapore, Singapore

March 19-21
Aviation Fuel Handling
Training Symposium
Dallas, TX

April 9-11
MRO Americas
Atlanta, GA

April 27-May 1
International Aviation
Snow Symposium
Buffalo, NY

May 7-9
NBAA Maintenance
Conference
Fort Worth, TX

May 26-29
IATA Ground Handling
Conference
Madrid, Spain

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OCTOBER 20-22, 2020

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LAS VEGAS, NEVADA

BUSINESS BUZZ

► TOP NEWS

JBT Corporation Signs Agreement to Purchase LEKTRO, Inc.

JBT Corporation announced that an agreement is in place for the acquisition of LEKTRO, Inc. LEKTRO is a leader in the design, manufacture and supply of all-electric tow-barless tow and pushback vehicles for the business jet and commercial aviation market.



"We are excited to be part of JBT," said Eric Paulson, owner of LEKTRO. "Together our companies will provide customers a global sales and support presence, a much broader portfolio of products and services, and deeper engineering capabilities for future product development."

LEKTRO's vehicles will complement JBT AeroTech's expanding line-up of diesel tow tractors and other ground support equipment (GSE) products that include deicers, cargo loaders, belt loaders, mobile stairs, pre-conditioned air carts and ground power units. Leadership at LEKTRO will remain unchanged.

"LEKTRO's reputation for great customer service and products that are easy to operate, easy to maintain, and highly reliable makes it an ideal fit for JBT AeroTech," said Dave Burdakin, EVP and president at JBT AeroTech.

Garsite Progress LLC Acquires Kansas Operations

Garsite Progress LLC, an entity formed by AFI Partners, announced the acquisition of Garsite and Progress Tank, U.S.-based manufacturers of aviation refueling and liquid



waste transportation equipment.

"Garsite and Progress have a combined history of 160 years of experience as the industry leaders in both aviation refueling and liquid waste equipment manufacturing. This partnership marks a significant opportunity for Garsite and Progress to focus and accelerate on core competencies, including customer service, quality and an increased distribution platform," said E.J. Antonio, managing partner of AFI Partners.

For the last 67 years, Garsite has manufactured aircraft refuelers, hydrant dispensers and fueling equipment that are in-service every day at nearly every major U.S. airport and in over 80 countries on six continents. Additionally, Garsite is proud to provide all U.S. military branches through both GSA and DLA HEPP contracts.

Since 1922, Progress Tank has been a leading manufacturer of truck-mounted tanks used in the refined fuel, heating oil, propane and liquid waste industries.

CMA Approves Menzies Aviation's Acquisition of Airline Services

Menzies Aviation announced that the UK Competition and Markets Authority (CMA) has approved its acquisition of Airline Services, a leading aircraft presentation and deicing specialist. The acquisition makes Menzies the largest provider of aircraft deicing services in the UK.



While the acquisition was completed in 2018, Menzies self-referred the deal to the CMA, who carried out an assessment of competitive issues. Now that the acquisition has been approved by the CMA, Airline Services can now be integrated into the Menzies Aviation business. Menzies' UK and Ireland business will now operate at 13 locations, offering

aircraft presentation and deicing services at nine airports where Menzies currently operates, alongside four airports where Menzies did not have a previous presence. The acquisition sees 900 Airline Services employees join Menzies Aviation.

“Since the acquisition of Airline Services in April 2018, we have been working hard to gain regulatory approval from the CMA, and I am delighted that we can now officially welcome our Airline Services colleagues into the Menzies Aviation family,” Jamie Ross, EVP EMEA said. “We now have the opportunity to strengthen our ground handling, deicing, and aircraft presentation offerings in the UK, securing our place as the aviation services provider of choice.”



dnata Renews ISAGO Registration in Philippines

dnata renewed its IATA Safety Audit for Ground Operations (ISAGO) Registration by the International Air Transport Association (IATA) in the Philippines, and obtained ISAGO Station Accreditation at Manila Ninoy Aquino International Airport (MNL), Cebu Mactan International Airport (CEB) and Clark Diosdado Macapagal International Airport (CRK) following successful completion of ISAGO audits at these airports.

“Safety and security are fundamental aspects of our operations,” said Margaret L. Yu, CEO, dnata Philippines. “We always aim to achieve the highest possible safety standards for our customers, their passengers as well as our employees and facilities, and our efforts are clearly reflected in our corporate culture, trainings and processes.”

ISAGO is an industry global standard for the oversight and audit of ground

service providers. ISAGO is conducted in a standardized and consistent manner using internationally recognized standards and requires conformance with the applicable ISAGO Standards and Recommended Practices at both the corporate and station levels.



WFS Achieves IATA CEIV Pharma Certification at Amsterdam Schiphol

Worldwide Flight Services (WFS) has gained IATA CEIV Pharma certification for its pharmaceutical handling facilities at Amsterdam Schiphol Airport, one of Europe's leading air cargo hubs for healthcare and life science products. At Amsterdam Schiphol, WFS provides dedicated temperature-controlled facilities for pharma products requiring both 2–8°C and 15–25°C environments.

In preparation for its CEIV audit, WFS carried out a risk analysis and updated its quality management system and operating procedures to ensure full compliance with IATA's requirements. All employees received specific training on the procedures and pharma handling processes, while the team leading the CEIV program for WFS also completed IATA's own CEIV Pharma course.

“Completing the audit process has enhanced our ability to provide safe and secure handling of temperature-controlled pharmaceutical shipments and will allow us to develop closer partnerships with our airline customers in support of their own shipper and forwarder clients, which trust them to protect the quality of their pharmaceutical shipments throughout the transportation process,” Stéphane Scholving, WFS' managing director in Amsterdam said.



Checkport Switzerland Certified as First Swiss 'Independent ACC3 EU Validator'

Checkport, a subsidiary of Swissport International Ltd, is the first and only Swiss company to have obtained the IATA certification “Independent ACC3 EU Validator” and may now carry out third country validations for air carriers.

ACC3 stands for “Air Cargo or Mail Carrier operating into the Union from a Third Country Airport,” a designation required in order for carriers to fly cargo into or through the European Union, including Switzerland, Norway and Iceland.

“We are very proud to complete our overall Cargo security competence with the ACC3 certification,” said Daniel Steffen, CEO of Checkport Switzerland.

Signature Italy FBOs Gain IS-BAH Accreditation

Signature Flight Support's locations in Italy are the first in the region to earn the International Standard for Business Aircraft Handling (IS-BAH) certification, the industry leading accreditation and



global standard for best business aviation safety practices. Milan-Linate (LIN), Milan-Malpensa (MXP), Rome Ciampino (CIA) and Venice (VCE) all passed the highly stringent, week-long safety management audit following an external assessment by a team of International Business Aviation Council (IBAC) accredited auditors.

"We are proud to announce that we have accomplished the first IS-BAH certification within Italy, and we look forward to bringing more of our European locations through the accreditation process," said Evie Freeman, managing director, Signature Flight Support – EMEA. "Safety is our core value and lived by every one of our employees. The audits took several days to complete, but several months of preparation had taken place before that by our dedicated safety team and the FBO management team for each site."

"Congratulations to the entire Signature Flight Support Italy teams for achieving IS-BAH certification," said Terry Yeomans, IS-BAH program director for IBAC. "All of us at IBAC commend Signature for this accomplishment and recognize their dedication to a safety culture that embraces global industry best practices for business aviation ground handlers."



ACI Jet at John Wayne Airport Achieves IS-BAH Stage I Certification

ACI Jet has received its International Standard for Business Aircraft Handling (IS-BAH) Stage I certification from the International Business Aviation Council (IBAC) for its John Wayne Orange County Airport (KSNA) FBO location.

"This is an important and prestigious certification for our John Wayne FBO to achieve," said Joe Daichendt, senior vice president, FBOs, ACI Jet. "It demonstrates to our customers and our employees the emphasis ACI Jet places on safety in

everything we do. This also complements our IS-BAO Stage II certification that our charter and management division holds, among its numerous other safety ratings."

In just two years, ACI Jet has made measurable strides in reshaping the landscape for business and general aviation users of John Wayne Airport. In addition to a 30 percent increase in fuel sales, ACI Jet has helped to grow the Orange County tax roll by adding \$275 million in based aircraft to John Wayne Airport since 2017.



Etihad Cargo Awarded IATA's CEIV Certification for Pharmaceuticals Logistics

Etihad Cargo has set a notable benchmark in the region by becoming the Middle East's first carrier to be awarded IATA's Centre of Excellence for Independent Validators (CEIV) certification in Pharmaceutical Logistics. The airline is one of only 16 carriers to hold this important certification worldwide. The certifications cover both the airline operations of Etihad Cargo, as well as cargo handling and warehousing at its hub at Abu Dhabi International Airport.

"Etihad Cargo is honored to become the region's first carrier to be awarded IATA's CEIV designation for Pharma. Since we launched our refreshed strategy in early 2018, a lot of focus has gone towards enhancing our premium product verticals and offering the highest quality and reliability standards to our customers. Today our TempCheck product receives a major boost with this important certification," said Abdulla Mohamed Shadid, managing director cargo and logistics at Etihad Aviation Group.

Etihad's cargo handling subsidiary Etihad Airport Services LLC has also been awarded the CEIV Pharma certification.



Avfuel Supplies SAJF for Business Aviation at Van Nuys Event

Avfuel is pleased to have supported the Business Jets Fuel Green: A Step Toward Sustainability event at Van Nuys Airport (KVNY) with its first full truckload delivery of sustainable alternative jet fuel – a landmark for the fuel supplier's ongoing SAJF initiatives.

"Sustainable alternative jet fuel is the future for aviation, both in the commercial landscape and for business aviation," said Keith Sawyer, Avfuel's manager of alternative fuels. "Avfuel is committed to the industry's initiative to meet carbon neutrality goals and has worked diligently in the supply of and logistics for the environmentally-friendly product."

As part of the event, operators flying in to Van Nuys' Castle & Cooke Aviation and Signature Flight Support FBOs were able to purchase Avfuel's new SAJF product on January 17, helping to significantly reduce carbon emissions. Avfuel supplied the day's SAJF in partnership with Gevo, Inc., which produces the concentrated SAJF product. Avfuel then blended the concentrated SAJF product with petroleum-based jet fuel and tested the fuel for quality and to ensure it met ASTM D1655 standards.

► PEOPLE

SkyMark's Conley Promoted to Sales and Marketing Coordinator

Janina Conley has been promoted to sales and marketing coordinator at SkyMark Refuelers.



"This is all about customer service for us," said Steven Paul, CEO. "We want our new and valued customers to have a primary point of contact – someone who's efficient and knows how to get answers quickly. There's no one better at that than Janina."

Conley has been on the SkyMark team for three years and in customer service for six years. She is well known for her effi-

ciency and responsiveness. For SkyMark customers, this new role means quicker response times on quotes, order statuses and general questions.

"My goal is to respond to calls and emails within 24 hours," says Conley. "If I can't address the issue directly, I will know who can. I'm thrilled to be the first point of contact for our customers."

Some of Conley's responsibilities include providing pricing for new customers, responding to customer questions on existing orders or order changes, coordinating trade shows and client entertainment, assisting with customer visits and other customer needs.

Glen Appointed VP Cargo Development at Menzies

Alan Glen has been named the new VP Cargo Development at Menzies and will

take up the post in mid-February.

Glen has been with Menzies for a year as Head of Operational Learning, having previously worked with Cathay Pacific in Hong Kong where he was General Manager – Cargo Services for their global business.

Bringing substantial experience of both training and cargo procedures to his new role, Glen has previously worked alongside the Cargo Working Group on a number of training initiatives.

"I'm looking forward to returning to the world of cargo, and am delighted to lead Menzies Aviation's Cargo Development at this exciting time of growth and innovation for this part of the business," Glen said. "I look forward to meeting more of



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the team in the near future.”

“I’m very much looking forward to working with Alan, and I hope you will all offer him a warm welcome as he settles into the role,” Robert Fordree, SVP Commercial, said. “He will transition from his existing role within the Training Team over the coming weeks as we work to find his replacement.”

Zovar, Curzon Appointed to New Roles at Hatz

Hatz Diesel has officially named Steve Zovar customer service manager for North America. He will oversee Hatz parts, service, warranty and technical support which has been placed under a single umbrella.

“This new position has been created to streamline all aspects of our customer service and improve the customer expe-

rience,” said Mike Hartoonian, president and CEO of Hatz Diesel of North America.

Additionally, Hatz appointed DeeAnn Curzon as executive assistant to the president and management team. She brings more than 25 years of administrative experience to Hatz including operations, project coordination, data management systems and scheduling.

At her previous position, she was instrumental in the implementation of a new corporate structure, improvement of management systems for calendar planning and the training of regional staff.

“DeeAnn’s drive, commitment and experience will help her become an important part of our Hatz Team,” said Hartoonian.

Ropers Appointed to Lead Amadeus’ Strategic Growth Businesses

Amadeus announced the key strategic appointment of senior business and technology heavyweight Stefan Ropers to lead its Strategic Growth Businesses, effective February 1.

Ropers, who most recently was Head of Adobe in Central Europe, joins Amadeus to drive growth across the company’s diverse Strategic Growth Businesses portfolio, which includes its airport, rail, and payments customer units.

“During the course of his career, Stefan has developed and demonstrated significant technology, strategy and business model expertise, holding a variety of leadership roles in some of the most respected and successful companies in the world,” said



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Amadeus' president and CEO Luis Maroto. "We are very confident that his combination of consulting, start-up and 'big tech' experience will be extremely valuable to both our expanding Strategic Growth Businesses and also to Amadeus overall."

► NEW DEALS

Lufthansa and Fraport Extend Ground Handling Partnership at Frankfurt Airport

Deutsche Lufthansa AG is entrusting Fraport AG Ground Services with the provision of ground handling services to all Lufthansa aircraft at Frankfurt Airport for another seven years. The two companies signed a respective contract which will run until March 31, 2026. Both part-



ners agreed not to disclose the contract volume.

"We are pleased to extend the long-standing and successful partnership with Lufthansa as our most important customer at Frankfurt Airport. Following a series of constructive talks, we submitted a competitive offer. The new agreement contains an extensive package of services and agreed quality standards," Fraport AG's executive board member and labor director Michael Müller said.

Under the agreement, Fraport's ground handling unit will be responsible for a range of services, including loading and

unloading of Lufthansa passenger aircraft, baggage and cargo transportation, passenger bus transfers to and from the aircraft, as well as pushback, supply and waste disposal services.

World Fuel Wins Contract to Supply London Oxford Airport in UK

World Fuel Services (World Fuel) has won two contracts with London Oxford Airport and London Heliport to supply Jet A-1, Avgas and training packages. This five year contract began in February.

London Oxford is the largest user of Avgas in UK and is the third largest dedicated general aviation airport in the London area. Aside from offering fuel and training packages, World Fuel will also offer refueling equipment, maintenance support, marketing support, and potential



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design and build of a new fuel farm at Oxford.

"We very much look forward to joining the World Fuel Network. As the UK's busiest business aviation airport outside the LTMA (London airspace), we offer

very high standards as an IS-BAH Stage II accredited facility, one of the first in the world. Customers will also enjoy great opening hours. In owning the heliport too, we offer unique benefits of dual-use, with the lowest cost helicopter shuttles

to central London when interlining with a jet at London Oxford, a 22 minute run," said Andi Alexander, managing director to both London Oxford Airport and the London Heliport.

"The win of this competitive bid expands our supplied to 14 UK locations including three of the top five," said Noel Siggery, director, GA and market development at World Fuel. "Our partnership with London Oxford and London Heliport will be an important addition to World Fuel Network as we continue to bring solutions to our customers. Our operators and cardholders in the region will benefit from this partnership because they will receive quality service and a great business option in England."

BEUMER Lands \$33 Million Contract in Aruba

BEUMER Group has signed an agreement with Aruba Airport Authority N.V. for the design and installation of a \$33 million, high-speed baggage transportation and sortation system at Aruba's Queen Beatrix International Airport. The installation, which also includes BEUMER's residential program for on-site operation and maintenance, is part of the airport's Gateway 2030 expansion and modernization program.

The new system will eliminate the requirement to reclaim checked luggage and undergo a second passenger screening process which presently is in place for U.S. travelers. Additionally, the new system will allow U.S. and non-U.S. bound flights to operate from a common-use check-in facility.

"The application of U.S. Customs pre-clearance as well as the interface with TSA-compliant protocol baggage screening is a perfect application for our integrated



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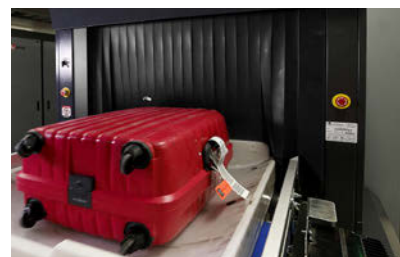
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CrisBag baggage handling and storage solution and provides the highest reliability and security of any system available,” BEUMER senior vice president Barry Lagerstedt said.

“We are very pleased to have crossed this important milestone,” said Aruba Airport Authority N.V. CEO James Fazio. “The new baggage handling system is the centerpiece of the airport’s redevelopment project and will allow for the modernization and streamlining of many of our passenger processes, most notably, a significantly more efficient U.S. Customs pre-clearance operation, improved baggage screening, and a more efficient use of the airport check-in hall capacity.”

Installation will begin in Q3 of 2020, with completion expected in Q2 of 2021 in coordination with the opening of the Gateway 2030 project construction phase 1.

PrimeFlight Aviation Services Acquires

ReadyJet

PrimeFlight Aviation Services has acquired New York-based aircraft appearance and leather care company, ReadyJet.



“We are excited to expand our current aircraft appearance offerings with ReadyJet’s specialized leather care program and deep clean services,” said Dan Bucaro, CEO of PrimeFlight Aviation Services. “The ReadyJet network extends PrimeFlight’s presence into 18 additional airports, including Toronto and Boston.”

With a presence at 37 airports in the U.S. and Canada, ReadyJet offers a multitude of interior clean, exterior clean, and leather care services including major effort cleans, aircraft carpet care, brightwork, dry washing, wet washing, waxing, leather cleaning, ink removal, and color touch-up. ReadyJet will continue to operate under its brand as a wholly owned subsidiary of PrimeFlight, as PrimeFlight works to integrate the operations into its service network.

“We are excited to join the PrimeFlight team,” president of ReadyJet Mark Farrington said. “Under PrimeFlight’s ownership we will gain access to key resources that will help us to continue to grow and further develop solutions for our customers.”

AGI Adds New Business at ORD and LAX

Alliance Ground International, LLC (AGI) announced the commencement of handling services with Japan Airlines at Chicago’s O’Hare International Airport (ORD). AGI will assume full warehouse and office handling services for Japan Airlines.

At Los Angeles International Airport (LAX), AGI announced the start of services with Nippon Cargo Airlines (NCA) where the company will manage the warehouse and office functions. Ramp handling for NCA at LAX will commence in February.

AGI is extremely honored to expand its US handling partnerships with both Japan Airlines and Nippon Cargo Airlines. Alliance Ground International, LLC presently performs total cargo handling services at ATL, EWR, FLL, JFK, LGA, MCI, MCO, MIA, ORD, LAS, LAX, SFO and SLC and employs approximately 2,700 skilled ramp and cargo handling personnel.



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Optimization Software Helps Airports Go Green with Ground Support

Recently, airports have begun scrutinizing their GSE and ground transportation methods with the goal to reduce emissions. By applying advanced software, greater positive changes can be achieved.

By Alexander Wendorff

For many years, there have been various environmental regulations and initiatives directed at airports. Agencies such as the Federal Aviation Administration (FAA) and European Aviation Safety Agency (EASA), as well as industry

associations such as the Airports Council International (ACI) and International Air Transport Association (IATA), all have played an important role in advancing a more environmentally-conscious industry.



Photo courtesy of INFORM

Airports have become much more proactive in adopting sustainability practices and programs. They opt for green buildings, initiating stronger environmental management policies and using more energy-efficient heating, ventilating and air conditioning (HVAC) equipment and co-generation systems. All of these actions have contributed to their lower carbon footprints.

One area which intensified their “green” focus is ground support equipment (GSE) operations. In addition to initiatives such as the broader use of diesel-electric hybrid or pure electrical GSE/vehicles, electrical charging stations and “green taxiing,” airports are applying sophisticated optimization software to advance their eco-sensitive priorities.

Ground Support Equipment’s Emissions to the Air

From airport taxi trolleys to luggage carrying systems, ground support equipment (GSE), in fact, can have an adverse effect on air quality. Increased air traffic has, in turn, created a higher demand for GSE with correlating increases in air emissions.

While the emissions of aircraft have been monitored for some time now, the focus on GSE has been limited. Consequently, there is not much data to indicate its environmental impact.

More recently, however, airports have begun scrutinizing their GSE and ground transportation methods with the goal to reduce emissions. Measures such as converting diesel belt-loaders and bag tugs to electric GSE has contributed to airports’ environmental resource conservation and emissions.

By applying advanced software, greater positive changes can be achieved.

Software Supporting Airports’ Eco Goals

Optimization software is helping airports enhance various airport operations including ground support activities. INFORM’s GroundStar solutions for planning, scheduling and operations management, for example, are being applied to achieve better resource planning and management, and to optimize the travel time of an airport’s passenger transport buses, catering vehicles and

Airports have an opportunity to harness the power of optimization software to advance their “go green” initiatives relating to GSE and facilities’ enhanced environmental management.

loading/unloading equipment. This leads to lower fuel consumption.

The GroundStar planning and operation solutions for gates and stands are also positively impacting terminal operations by facilitating gate changes that keep aircrafts’ gate selections closest to their original gate.

Regarding the ground fleet management, advanced mapping software, such as GS GroundFleet, enables airports to better identify the location of their GSE, including its status (i.e., moving or stationary) and whether equipment is due for maintenance. Through this enhanced intelligence, airport staff is armed with the data they need to make better decisions in the more efficient use of GSE.

Their ability to better manage GSE also contributes to an airport’s lower fuel consumption, maintenance costs and fleet size, stemming from improved equipment utilization and maintenance.

Frankfurt Airport’s Environmental Stewardship

One airport recognized and awarded for its environmental stewardship is Frankfurt

am Main International Airport. As Germany’s largest commercial airport, it is the fourth busiest in Europe and has long been at the forefront of spearheading environmentally-sound and innovative practices. The airport has implemented measures to reduce cargo-transporter fuel consumption and uses mobile units for HVAC as well as ground power units (GPUs) and diesel and electric high loaders with its GSE.

Since 2013, the airport has been using INFORM’s GS Ground Fleet and GS Airport Map software for localization and telemetry monitoring, maintenance support, and the reporting and detection of foreign (unauthorized) equipment utilization. GS GroundFleet provides all necessary information on GSE from dollies to high loaders in real time. Using its comprehensive filter functions and color coding, airport personnel gains a quick and easy overview of GSE. By promoting strategic planning and preventive maintenance, unexpected equipment problems are reduced. The solution stores daily operation data in the system, which can be used to produce individual reports for further analysis and process optimizations.

All of these are important standalone benefits, but particularly impressive when viewed in the context of the considerable savings Frankfurt Airport has achieved. These include equipment reductions (i.e., from 70 GPUs to 64 GPUs; 120 high-loaders to 118 high-loaders) for significant cost savings and fuel savings, as well as a reduction in manually picking up operating hours for reduced workloads.

Airports have an opportunity to harness the power of optimization software to advance their “go green” initiatives relating to GSE and facilities’ enhanced environmental management. The value added is in the related savings generated along with enhanced efficiencies and resource management. **GSW**



▶ ABOUT THE AUTHOR:

Alexander Wendorff is a solution manager at INFORM GmbH, where he has served for almost 24 years. His role in assisting the company’s aviation clients encompasses a wide range of skills from project management and process improvement to business strategy and logistics. He has been instrumental in numerous successful optimization software solution roll-outs.

A night-time photograph of an airport tarmac. Bright ground lights create a hazy, atmospheric effect. In the background, a red aircraft service vehicle with "norwegian.com" written on its side is visible. The scene is illuminated by the intense white light of the ground lights, contrasting with the dark night sky.

BATTLE THE ELEMENTS

When cold temperatures reach potentially dangerous levels, employers must take precautions to ensure workers on the ramp are servicing aircraft safely.

By Josh Smith

Winter weather conditions impact aviation throughout the winter season. But if planes are scheduled to fly, ground support personnel must be ready to work, regardless of condition.

As frigid temperatures and windy conditions reach extreme levels, it is important those working outdoors avoid cold stress.

"At the end of the day, if the airport is still open, we have to provide the service because we're contractually obligated to do so. At WFS, safety is a top priority, so we'll take whatever precautions are necessary to ensure the safety and well-being of employees and customer aircraft," says Victor Chin, senior vice president, safety and security compliance for the Americas at Worldwide Flight Services (WFS).

According to the Occupational Safety and Health Administration (OSHA), cold stress and its effects can vary depending on location. Simply put, cold stress occurs by driving down the skin temperature and eventually the internal body temperature.

"When the body is unable to warm itself, serious cold-related illnesses and injuries may occur, and permanent tissue damage and death may result," warn OSHA officials, noting frostbite and hypothermia are types of cold stress.

As heat leaves the body, workers can become vulnerable to cold stress. What's more, increased wind speed causes heat to leave the body more rapidly. Being wet or damp, even from body sweat, further facilitates heat loss, OSHA officials say.

Being aware of the wind chill temperature is critical, so employers can determine the exposure risk of their workers.

OSHA also recommends monitoring workers' physical condition while performing tasks. This is especially true for new workers who may not be accustomed to cold working conditions and for those employees that have returned to the job after spending time away from work.

"Environmental cold can affect any

worker exposed to cold air temperatures and puts workers at risk of cold stress," officials at OSHA say. "As wind speed increases, it causes the cold air temperature to feel even colder, increasing the risk of cold stress to exposed workers, especially those working outdoors."

With this in mind, it's important for employers to protect workers from the hazards of working in frigid conditions. OSHA recommends employers train workers and provide engineering controls, insist the proper protective clothing is utilized and implement additional best practices.

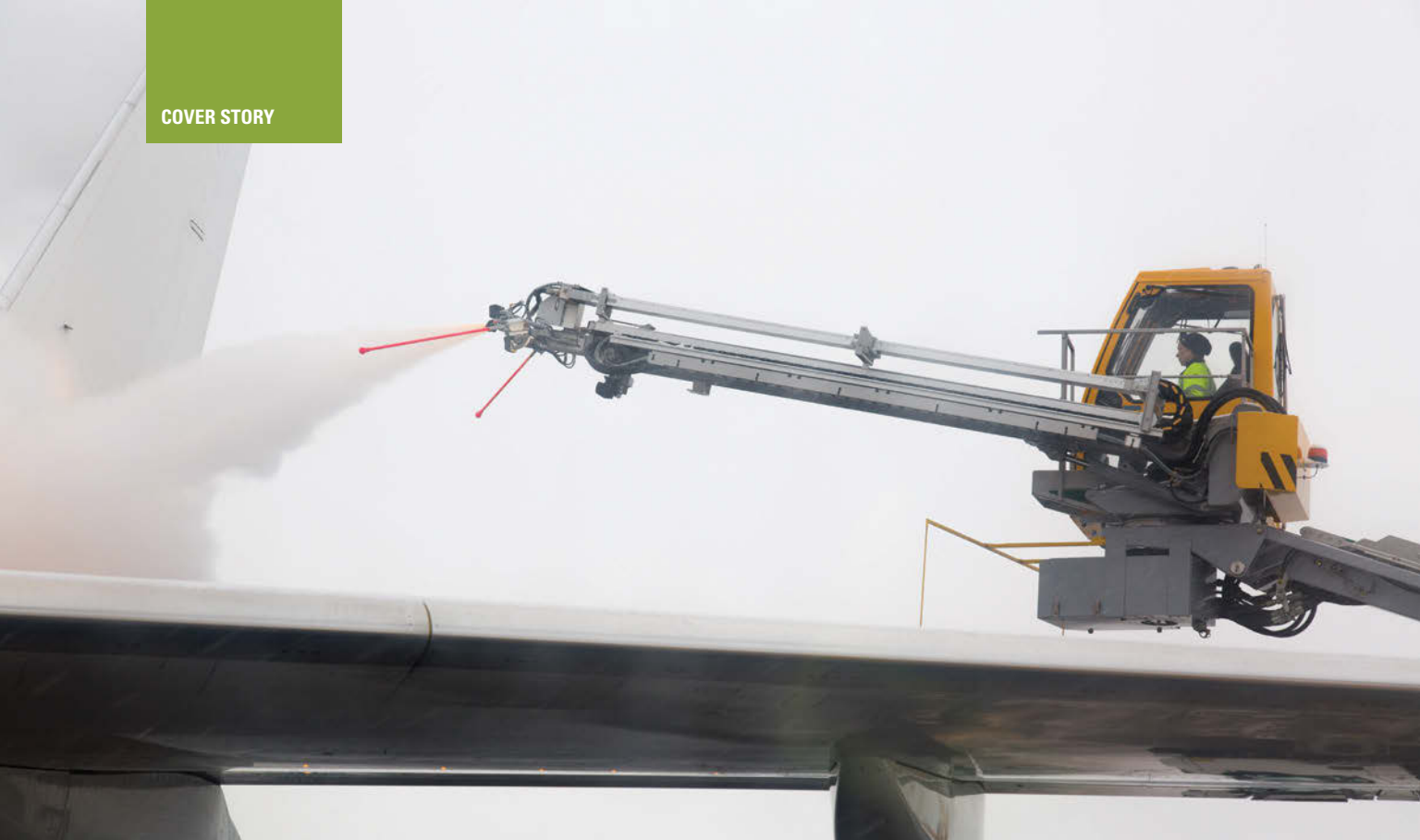
Training

What is considered "cold weather" may vary from location to location, but WFS' Chin says once temperatures drop below freezing levels, general managers (GMs) are instructed to take additional precautions with their crews.

"The alert process usually goes through the GMs, and the GMs disseminate the information by posting the safety bulletins. We also provide them with content for their shift briefings," Chin explains. "The GMs will then push that down to their employees during their shift briefings to ensure it's front and center."

Officials at Menzies Aviation, which provides deicing services to airlines in some of the world's most extreme environments, note using the latest equipment correctly and safely is paramount to working in the cold.

"Sufficient training is our No. 1 priority when it comes to looking after the safety of our employees," says Stuart Carmichael, SVP of risk for Europe, Middle East and Africa (EMEA), adding in Scandinavia alone, his company has already performed



Photos courtesy of Menzies Aviation

more than 5,000 deicing operations during the 2018/19 winter season using Vestergaard Elephant Beta deicers.

“Menzies delivers the highest level of safety and technical training to our deicing teams,” he continues. “All of our new deicers are required to undertake a combination of classroom, on the job, online and simulator (on demand) training. Each year, this training is refreshed, and employees must complete a further examination in line with our company requirements, based on

AS6285A and AS6286 and in line with local regulations.”

Similarly, Shaun Hannam, head of safety at dnata, says campaigns are run regularly at relevant stations to ensure colleagues are adequately prepared for bitter conditions.

He says dnata makes sure employees are aware of the importance of wearing the correct cold weather personal protective equipment (PPE); regularly take warm breaks indoors; understand the importance of continued hydration with hot liquids;

and recognize the signs and symptoms of cold-induced illness and how to deal with it.

In addition to comprehensive training, OSHA recommends employers provide engineering controls, which can be effective in reducing the risk of cold stress.

“For example, radiant heaters may be used to warm workplaces like outdoor security stations. If possible, employers should shield work areas from drafts or wind to reduce wind chill,” OSHA officials say. “Employers should use engineering controls to protect workers from other winter weather related hazards.”

WFS’ Chin notes once temperatures fall below 32 degrees F, his company issues specific safety bulletins to remind employees to avoid trips and falls.

These announcements advise employees to plan extra time when doing work, so they’re not in a rush. Additionally, the bulletins serve as reminders to remove snow from the bottom of shoes when entering a building, use handrails, stay on designated walkways and other safety measures.

Team leaders should use salt and sand when and where possible to keep walking surfaces clear of snow and ice to prevent trips. And if driving a vehicle, stopping distances should increase

PPE

In addition to proper footwear, OSHA officials point out that dressing properly is vital to preventing cold stress.

Layering provides better insulation, and because of this, OSHA officials suggest wearing at least three layers of clothing, focusing on keeping moisture away from the body. What's more, a mask to cover the face and mouth, a hat to cover ears and reduce the amount of body heat escaping from the top of the head, insulated gloves to protect hands and waterproof boots to protect the feet can allow safer working practices.

"We ensure that our employees are equipped with the very latest PPE," says Menzies' Carmichael. "At a minimum, this includes goggles, heavy duty rain jackets (wind proof), ear defenders, caps, safety boots and safety harnesses (where needed) to protect them from the very cold and harsh

weather conditions."

Also, hand warmers can be inserted into gloves to add additional heat and cold-weather protection.

Best Practices

A critical component of working outdoors is staying in communication with all parties involved and being prepared.

"Our Winter Readiness program involves thorough preparation for all aspects of cold weather requirements, including supply chain management, vehicle preparation, documentation and procedure checks, engagement with airline customers and pre-auditing and inspection of facilities and providers," Menzies' Carmichael states. "We engage in detailed planning in advance of the winter months and conduct weekly deicing calls throughout the season to ensure active oversight of the entire operation.

"In addition, we host an annual deicing conference for our EMEA, Oceania and Americas regions," he notes. "We invite our airline customers, accountable managers, DAQCP, fluid and deicer manufacturers to gather and discuss the latest innovation, policy and technology developments to ensure that we are at the forefront of the industry."

"We'll remind GMs and advise them to provide hot chocolate or instant soups for the employees," Chin of WFS adds. "We'll remind employees to go inside every so often to warm up. Because once you're out there in the elements, you're working a flight, it's easy to get distracted and forget how long you've been out there. So, we're proactively reminding and encouraging employees to go back inside and warm up."

If conditions are becoming more treacherous, dnata's Hannam says employees



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should voice their concerns.

"We take many steps to ensure work is completed without putting people at risk," Hannam says. "We encourage our employees to raise any workplace safety issues with their supervisors through our observation program. This can be cold weather issues or any other hazards.

"Briefings are conducted prior to high-risk activities to ensure colleagues under-

stand risks and hazards," he continues. "Specifically, for cold weather the teams are briefed to ensure adequate rest times are clear, appropriate PPE is available and cold-induced illness signs and symptoms are understood."

In summary, to determine if safe work practices are in place, OSHA says to consider:

- Providing workers with the proper tools

and equipment to do their jobs.

- Developing work plans that identify potential hazards and the safety measures that will be used to protect workers.
- Scheduling maintenance and repair jobs for warmer months.
- Scheduling jobs that expose workers to the cold weather in the warmer part of the day.
- Avoiding exposure to extremely cold temperatures when possible.

ExecuJet Expands Business Aviation Operations to Antarctica

ExecuJet recently announced it plans to give customers the opportunity to travel to the southernmost point of the world.

This year, ExecuJet, part of the Luxaviation Group, is collaborating with travel adventure company White Desert and utilizing the special flight ops experience of BestFly to provide flights from its Cape Town, South Africa, FBO location to Antarctica.

Before embarking on the five-and-a-half hour flight to the subcontinent, customers will receive a full weather briefing and run-down of the day's conditions.

"Contingency plans were put in place as soon as White Desert approached us to be the supplier for these trips," says Gavin Kiggen, vice president Africa at

ExecuJet. "We contracted BestFly as we know they are a trusted Angolan company and experienced in running special operations, as well as providing industry-leading service."

"For these flights, our minimum weather requirements are significantly higher than those we use ordinarily. The team in Cape Town receive hourly reports including weather observations and runway friction measurements from the staff at Wolf's Fang runway in Antarctica."

According to BestFly CEO Nuno Pereira, the operators had to complete a proving flight before being granted special ops approval.

"Support from the Aruba CDA, where

the AOC is from and the aircraft is registered, was excellent," Pereira says. "They sent a cold weather and ice landing specialist to evaluate the procedures that BestFly and ExecuJet established before the first commercial flight, and we performed admirably under cold weather conditions.

"With our full flight tracking system, a back-up plane on standby and a permanent tech team ready to deploy from Cape Town at a moment's notice, we are ready for anything this wild landscape can throw at us."

ExecuJet selected the Gulfstream G550 and G450 as the primary and back-up aircraft, respectively, as its able to make the initial flight and return without needing to refuel in Antarctica. What's more, the braking ability of the aircraft is suitable for landing on a runway constructed out of blue ice.

Compacted ice has the same tensile strength as concrete. However, braking coefficient for landing jets is the same as a wet runway, requiring the best possible systems.

"The runway surface is completely safe for the aircraft, underfoot it is slipperier than any other on Earth," Kiggen says.

In total, ExecuJet and BestFly will run approximately 10-15 flights with White Desert over the course of four months during the southern hemisphere's summer season, spanning November through February.



Photo courtesy of ExecuJet



Photo courtesy of Menzies Aviation

- Using relief workers to assign extra workers for long, demanding jobs.
- Providing warm areas for use during break periods.
- Providing warm liquids (no alcohol) to workers.
- Monitoring workers who are at risk of cold stress.
- Monitoring the weather conditions during a winter storm, having a reliable means of communicating with workers and being able to stop work or evacuate when necessary.
- Acclimatizing new workers and those returning after time away from work by gradually increasing their workload, and

allowing more frequent breaks in warm areas, as they build up a tolerance for working in the cold environment.

- Having a means of communicating with workers, especially in remote areas.
- Knowing how the community warns the public about severe weather.

"We've been operating for many years, not just in the U.S. but globally," Chin says. "We have experience operating in many different types of climates and environments, and different types of winters and weather conditions.

"Our operational leaders will hold regular calls with their teams, so we're sharing best practices. Our safety team also holds regular calls with all of our GMs where we also share best practices and lessons learned," he continues. "So, we're not going to wait for something to happen before we send out a reminder to an individual station." **GSW**



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Find Success in Fuel Training

With so many planes and fueling nuances, training is an ongoing process and has serious repercussions if not taken seriously.

By Jen Bradley

"I can still remember the very first airplane I ever fueled, back in 1975," says John Lindner, risk operations manager for EPIC Fuels. "My training consisted of: 'See that airplane over at the pumps? Fill it with fuel.'"

After a long career which has spanned positions such as a line manager, tank farm manager, fuel buyer, ground support, contract maintenance, and more, Lindner came to work at EPIC and brought years of on-the-airfield experience and industry know-how with him.

He is one of five inspectors who help FBO customers nationwide control their risk factors when it comes to fuel. A large focus of this risk assess-

ment is on training. He says he and his team review training policies, and make sure those policies are current and tasks are being completed properly.

"Training is weighted quite heavily on our checklist," Lindner says. "You could be fueling out of maybe some of the worst conditions, but if you're trained and know how to do it safely and properly, it can be done. Training is the core of everything that happens in my mind."

As a 45-year industry veteran, Swissport Fueling Inc.'s operations and safety manager Joseph Kastelitz concurs. He says the difference between fueling and other ground support tasks is that fueling is a one-man job.

"The fueler has to be very well trained and then we have to have a lot of supervision to make sure they are doing it correctly," Kastelitz adds.

Hire the Right Person

When it comes to fuel training, the professionals agree a quality employee is essential to a successful equation.

"You have to be geared up to train somebody that has no idea about aircraft simply because our industry is so small," says Wallace Sublett, flight support manager at Superior Aviation Company (SACjet), which includes PATCO, Sacramento International Jet Center and Mather Jet Center. "Rarely do we come across individuals that have been in the industry very long or at all."

For that reason, he says their training program is geared toward a new employee that is also new to aviation, and that with SACjet's three locations, new employees have the opportunity to be trained on anything and everything that has to do with the industry.

Lindner says he's had employees offer to work for free, simply because they want to be around airplanes in order to be a pilot someday.

"I'm not kidding," he says with a laugh. "I told them I had to pay them – it's the law, but some of them were the best employees I've ever had because they were driven."

Woman or man, it doesn't matter, he adds, saying: "I've had a number of women fuelers that were super

Photo courtesy of EPIC Fuels



and very detailed oriented. The start of this process is getting the right person."

Sublett couldn't agree more. He says that even by offering the best training in the world, difficulties will follow if an employee is not willing to learn.

It can be hard for FBOs to find people, and Lindner says flight schools are good places to look. Word of mouth helps too, as do the traditional job notification methods such as papers and online ads.

To address turnover, SACjet has based its pay structure off training accomplishments.

"The more they do, the more money we put in their pocket and it's worked out quite well," Sublett explains, noting that employee retention improved 90 percent after that. "Turnover is very bad. It leads to accidents, incidents, mis-fuelings and other things you don't want. People who stick with you are trained, provide safety on the ramp and are better for customers."

Determine a Starting Point

NATA's Safety 1st training is the industry standard for fuel training, Sublett says, and what he uses to form the base of SACjet's overall training, but he says standard operating procedures (SOPs) should be unique to each airport and FBO.

"You can't just have a guy watch a couple of videos and put him on the ramp from day

one," he adds. "They need to be exposed to fueling and everything out there."

Lindner agrees that where to start with fuel training is tricky. Other than the standard regulations for training, he agrees it's best if ground support training professionals develop site-specific protocols.

With constantly changing protocols, Sublett says it's difficult to manage, but it's easier to fill in these things if a core training program is in place.

Kastelitz finds the same thing in his role, since his job is to make sure the SOPs match the actual training being done. When the airlines update their fuel manuals to changing regulations, he says his team then updates its manual, and so on.

Fire safety is a starting point for fuel training but determining nozzle pressure for a 737 isn't.

"Just the awareness of being at an FBO, on the airport and around fueling equipment has to be first," Lindner notes, adding the supervisor needs to make sure the new employee has a good head on his shoulders while on the ramp.

Step by Step

Classroom training comes first, says Kastelitz. Students must have a passing grade of at least 80 percent in the modules, which covers eight days. His classroom portion covers



Photo courtesy of EPIC Fuels

every aspect of fuel training, from reviewing equipment such as filters, meters and valves, and then goes into fire safety training. Kastelitz says this is very important training, also required by the FAA and used in Switzerland's locations worldwide.

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"The fueler learns to put out a fire, what type of fire extinguishers to use and spill control," he explains.

He then says that much of the training regarding fueling planes truly relates to safety, and that message is shared from day one. From reflective apparel to mobile equipment, Kastelitz says the fueling area of an aircraft is very congested and employees must know how to use safety devices, but also make sure the aircraft is 100 percent safe, by focusing on quality assurance checks.

This and more are covered in classroom training, and from there, fuelers must complete airline training, go through every module to learn aircraft types and each unique plane's fueling procedures.



Photo courtesy of EPIC Fuels

"We're trying to make sure whoever is sent out to fuel an airplane is 100 percent confident and actually knows what they're doing," he says.

Swissport recertifies its fuelers every year, then up to three years for airline training, depending on the airline's requirements. Sublett says it's about the same for SACjet's trio of locations.

After intense classroom training comes intense on-the-job learning, which lasts up to 15 to 20 days, depending on how the student is progressing, Kastelitz explains. The length of this also depends on how many airlines they are working with at a given airport. The company calls its airside trainers "coaches" and once the student becomes very confident, the classroom trainers head out to make sure that person is ready to be on their own.

Final Thoughts

These professionals saw the days of VHS tape training videos for fueling education, so online training from NATA has been a big deal. They agree it works well, and the Safety 1st program is improving every year and is very important to their fueling programs.

Sublett says the classroom, online training modules followed by practical, hands-on training has worked really well for SACjet.

"When they get out on the ramp, things resonate better with them and once they're involved in the process, it makes more sense," he points out.

With so many planes and fueling nuances, he explains that training will never be fully completed and that it's an ongoing process,

with serious repercussions if not taken seriously. So, he wants his employees to also be trained to ask questions and come to others when they aren't sure.

"Training is always an explanation of why we do things," Sublett adds. "You have your book and list of things, but you really have to help them understand why we are wearing 100 percent cotton clothes, bonding the aircraft, etc. I could tell them to attach the bonding cable to the

plane every time they fuel, but has anyone told them what would happen if they don't?"

Regardless of employees or changing regulations, Lindner says having a constant, well-defined training program and someone to oversee it is key. He believes that having the "constants" is the "best" best practice a small-town FBO or the largest operations in the business could have. **GSW**



▶ ABOUT THE AUTHOR:

Jen Bradley, owner of Bradley Bylines, is an aviation writer based in Wisconsin. She may be reached via her website at www.bradleybylines.com.

FOLLOW GUIDELINES

Joseph Kastelitz, operations and safety manager at Swissport Fueling Inc., says that as new industry regulations are adapted, the airlines and service companies then add those regulations into their documents. In his fueling role, the team follows quality assurance guidelines adopted by the airlines and oil companies which supply fuel.

These documents are produced by the top experts in fueling, Kastelitz says, including:

- ▶ JIG (Joint Inspection Group) – used worldwide except in the United States and Canada
- ▶ ATA 103 (AirTransport Association) – used in the United States, Mexico and Canada
- ▶ CSA Standards (Canadian Standards Association) – used in Canada.
- ▶ NFPA 407 (National Fire Protection Agency) – used globally for fueling safety requirements
- ▶ IATA (International Air Transport Association) – fuel servicing guidelines, used globally for fueling, and quality assurance
- ▶ EI (Energy Institute) – used globally for quality assurance



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The Effect of Human Factors in East Asia

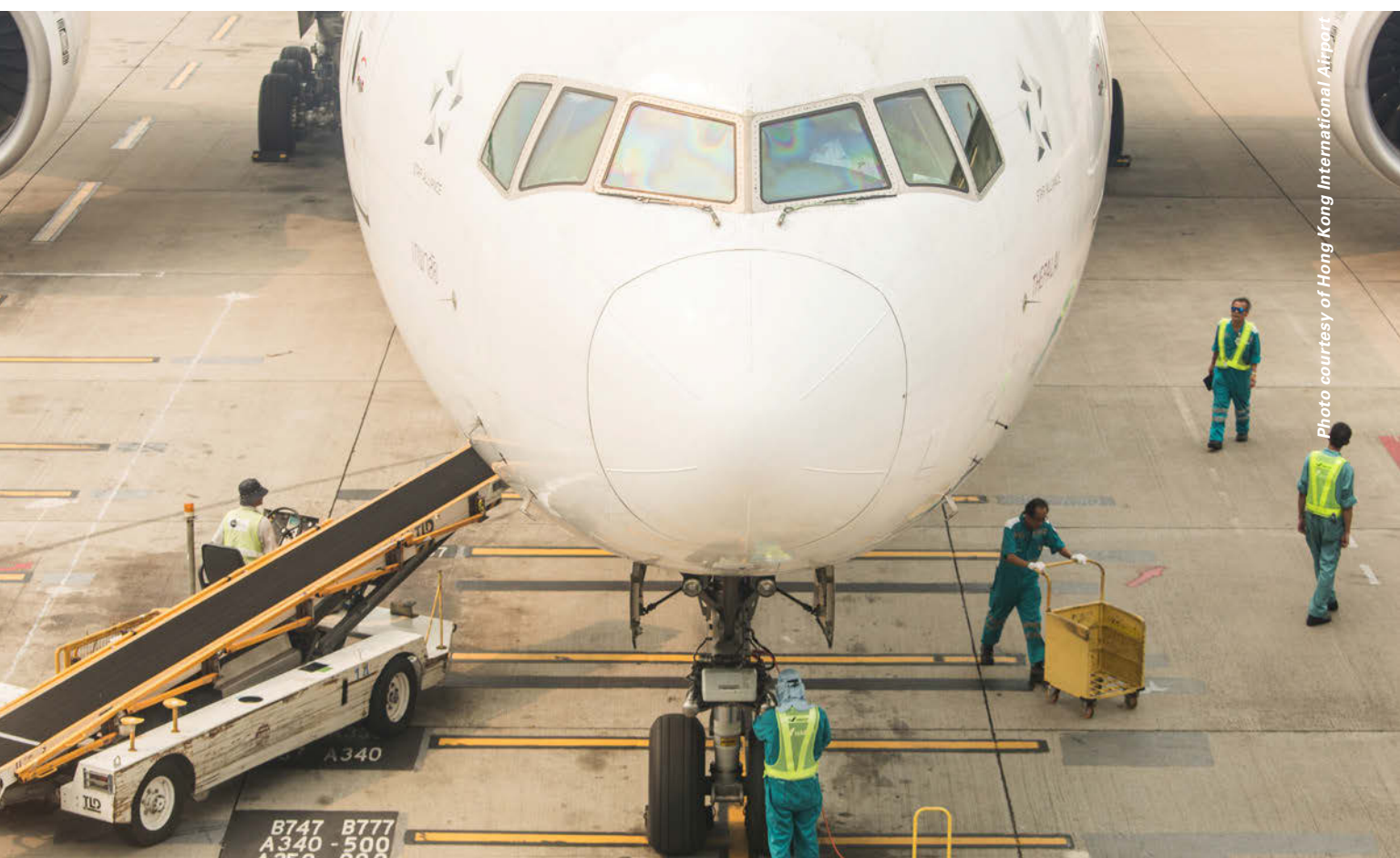
An employee's awareness of possible consequences should lead them to think and act in a safer way.

By Mario Pierobon

Human factor issues on the ramp are one of the main aspects affecting aircraft ground handling safety. Human error, and more broadly the limited consideration to human factors, can lead to risky situations in the ramp environment. In East Asia there are some main human factor issues on the ramp that are specific to the region and need specific targeting in human factors management initiatives at ground handling companies.

In relation to human factor issues, perception and image are very important. East Asian countries are no different in terms of human needs. However, what is different in East Asian countries is the variety of cultural pressures integrated in the society.

"And though they may differ country-by-country, status, seniority and respect take on a different perspective in Asia, as people behave in ways to avoid outcomes that may lead to loss-of-face for the person who is higher in status and shows a bit of grey hair," says Brenda Aremo-Anichini, managing director of ground handling consultancy Twiga Aero. "That person is therefore shown a form of respect, which, in aviation terms, avoids sharing the full picture and leads to decisions that do not address the underlying problems and protects the individual who may have made a poor decision, masking the problem altogether."



The Role of Training

Training plays an important part in human factors awareness. Employees' awareness of the possible consequences of their actions, should lead them to think and act in a safer way. In aircraft ground handling operations, human factors training is a requirement.

Aremo-Anichini, however, points out that "it often appears that, when provided, human factors training is a tick-in-the-box item, which may be adapted to consider the local culture. Its efficacy is therefore diluted. In the past years we have taken a different approach involving front-line staff to provide their direct, unfiltered inputs by creating an environment in which individuals can safely express themselves anonymously. This seems to deliver good results, especially in controlling safety-related problems."

There are some main aspects to emphasize in ground handling human factors training in East Asian countries. Indeed, ground handling human factor training syllabi in East Asian countries may need to differ from those in Western countries.

"There may be a problem as programs may not be adapted to the local environment. When making standards and designing training programs, we tend to try and fit everyone into the same mould," says Aremo-Anichini. "Where this checks the box,

it does little to address the real needs of an organization in terms of staff understanding requirements and ensuring conformance to suitable standard that meets the requirements of the local/regional work force.

"East Asians are hard workers and industrious. As much as this is a testament of the high economic growth rates in East Asia, it can also mean people overwork and are tired," she continues. "Fatigue is a big problem as people work hard and put their bodies to test during long hours of work and non-work related activities, leaving little time for good quality rest. Having multiple jobs is also not uncommon as people 'make ends meet.' And there appears to be an inherent sense of rush, among ground operations staff. Management talks about safety, security and quality outputs and all the while they check their watch for on time performance (OTP). This puts staff in a difficult situation and under pressure. A pressure they feel constantly and which they cannot shake loose as they strive to perform their duties in accordance with management instructions."

At Hong Kong International Airport (HKIA) training involves the community in order to increase efficiency.

"We work hand in hand with the airport community to enhance work efficiency. While individual ramp handling opera-

tors (RHO) have their own operation and training, which have to comply with our requirements, we also strive to maintain the high quality of ramp environment as a whole and enhance working conditions as well as daily operations via the use of automation, enhancement in staff welfare and inculcation of the safety-first culture," say officials of Airport Authority Hong Kong.

Safety Leadership

At the strategic level, safety leadership is a critical element to drive and shape the outcomes of the safety initiatives and improvements.

"Driven from the top, it is required to improve safety accountability and the sense of responsibility. The modus operandi is very often linked to punishment and sanctions for an individual not doing things 'right.' This being said, little room is left for honest mistakes. East Asia is a very large region with a variety of cultural backgrounds, hence it is difficult to generalize," says Aremo-Anichini. "This said, organizational cultures may tend to only consider just culture on paper. This important point is key to opening up a new paradigm that will foster an environment where people do not fear retribution or the loss of their job if something goes wrong due to an honest mistake that anyone can make. It appears

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that making mistakes is a 'shameful thing' rather than this being viewed as an opportunity to learn from past mistakes.

"Reporting near-miss events, incidents and accidents is perceived as having failed. Where an accident is obvious, a near-miss event can easily be excluded from reporting. This is the point where opportunities to improve slip through the organizations' capability to improve. Staff fear losing their job, retribution and reprimand for wrong doing. This results in a low level of accident reporting," continues Aremo-Anichini.

"The real nuggets lie in the near-miss events, which provide an opportunity to dig deep, conducting root cause analysis to identify the key elements that require change and what the change would look like once implemented. Through direct efforts, we have been successful at implementing programs to drive a high level of report-

ing, conformance to operational standards and fostering a culture of ongoing change. Such efforts have resulted in a significant decrease in incidents and accidents, while improving the reporting and driving a strong sense of safety culture among staff."

Broader Scope

At Hong Kong International Airport, which is one of the busiest international airports, human factor considerations are contextualized within process automation and transformation initiatives to offer visible impacts in tackling manpower and equipment shortage in daily operations.

"We introduced the powered baggage loading device with integrated RFID system, i.e., STACK@EASE, to assist departure baggage loading to alleviate RHOs' labor demand, to increase work safety and productivity," say officials at Airport Author-

ity Hong Kong. "We have implemented a pioneer resources-sharing solution – the ground service equipment (GSE) pooling scheme. Since July 2018, RHOs have been provided with critical GSE on stand for aircraft turnaround handling when they operate at the HKIA midfield apron, 95 percent of which are of the zero-emission electric models. The scheme alleviates staff's stress amid equipment search, reduces vehicular traffic on apron and fosters a cleaner and safer working environment."

Airport Authority Hong Kong has been enhancing working condition on the apron in consideration of the generally humid and hot weather in Hong Kong.

"In 2018, in addition to adding two resting lounges in the terminal, we further added 40 percent of seating, and provided 24/7 mobile drinking water supply trucks, vending machines and extra ventilation facilities on apron areas for ramp workers," Airport Authority Hong Kong officials say. "The improved working condition is expected to relieve stress associated with the dynamic and fast-paced surroundings on apron and enhance operational performance. Safety is the heart of our business. We offer regular safety roadshows, issues safety circulars and alerts to our RHOs to ensure we are well coordinated and aligned in achieving this common objective.

"Experience-sharing fosters our operators to build safety awareness and skilfulness when operating on apron. In whole, we implement multi-dimensional measures to mitigate risks and advance the quality of the apron working environment for our RHOs. We also encourage individual companies to tailor their own operating and training procedures to deliver efficient, safe and outstanding services at Hong Kong International Airport." **GSW**



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► ABOUT THE AUTHOR:

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ground handling safety. You may reach him at marioprnb@gmail.com.

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The Real Cost of a Poor Night's Sleep

Stay on top of worker fatigue to keep your airport safe.

By Michael Trufant

Airport personnel have a number of exhausting challenges to face every shift, and need to remain alert and focused to ensure passenger safety. On top of the pressure to provide outstanding customer service, everyone involved with flight crews and airport functions is prone to exhaustion.

If flight crews aren't getting the rest they need, they're putting themselves, coworkers and even passengers and the general public at risk. With millions of people flying every day, it is vital to take a serious look at airport fatigue prevention because of physical safety and operational cost concerns.

The Physical Dangers of Airport Fatigue

When it comes to air safety, pilots and copilots need to have a high level of energy and awareness to remain safe and efficient. During flights, they need to have proper judgment to correctly perform all procedures involved and prevent any accidents.

However, pilots are not the only ones who need to rest. Everyone involved with airport operations assists with passenger safety and their performance levels can be greatly affected by fatigue. Working longer hours, frequently changing shifts, and sleeping in new places with different time zones can make it difficult to get adequate rest.

People on the ground are operating machinery to taxi planes, clean them, transfer baggage, and more. On top of this, many workers have long commutes after their shifts, leading to drowsiness and increased vehicular accidents.

Ninety-seven percent of workplaces experience fatigue, and fatigue in aviation leads to delayed responses, impaired judgment, muscle weakness, moodiness such as irritability, memory impairment, poor concentration, dizziness and more.

This makes it difficult for fatigued crews to safely perform their tasks and keep their wits about them as the potential for accidents skyrockets, potentially causing runway chaos and delays, not to mention expensive workers' comp cases.

The Operational Cost of Airport Fatigue

The National Safety Council estimates that declining performance from fatigue can cost employers as much as \$3,100 annually per employee and that 43 percent of workers are sleep-deprived.

Hartsfield-Jackson Atlanta International Airport is America's largest airport, with over 63,000 employees. If 43 percent of them are sleep deprived and each cost \$3,100 annually in declining performance, that is a potential total loss of about \$84 million each year – just from fatigue. According to the airport's 2017 financial report, its operating revenue was about \$498 million, meaning that fatigue has the potential to reduce its operating revenue by a staggering 16.87 percent.

In addition to the estimated cost of declin-

ing performance resulting from fatigue, fatigue can lead to user error and accidents, which can in turn cause delays. According to Airlines for America, the total direct operating cost for one flight is \$62.55 per minute, or \$3,753 per hour.

When it comes to the airline industry, time is most definitely money. The Bureau of Transportation Statistics estimates that 18 percent of U.S. flights were delayed in 2017. Airlines and airports can take steps to ensure that their employees are healthy and getting enough sleep to perform optimally.

Preventing Fatigue by Managing Sleep Apnea

One of the most common causes of fatigue is obstructive sleep apnea (OSA), a sleep disorder affecting about 18 million Americans. As many as 80 percent of sufferers remain undiagnosed because they don't remember exhibiting the most common symptom: waking up multiple times in the night. When left untreated, sleep apnea can lead to congestive heart failure, stroke, depression, chronic fatigue, diabetes and many other health risks.

Usually symptoms like waking up with a headache, waking due to choking or coughing, and feeling exhausted after a night of rest go ignored unless a partner alerts the sufferer to a snoring problem. However, screening for sleep apnea is incredibly easy, so why wait?

Employers can empower employees to take action in their own homes. No need for a doctor's office visit for an expensive, time-consuming test while trying to sleep when connected to tons of tubes and wires. Instead, you can contact a healthcare or durable medical equipment provider (DME) for an easy, at-home test.

The test will be shipped right to your employee's door with simple instructions. It will measure your oxygen levels and breathing patterns, as well as pulse, to accurately detect when breathing stops.

Then, a qualified clinician will analyze

Individuals and all parties involved in aviation have a responsibility to make flying as safe as possible – for everyone in the air and on the ground.

the results to see if the employee has OSA. If they do, CPAP (Continuous Positive Airway Pressure) therapy is prescribed as a management tool, and is nearly 100 percent effective among compliant patients. This instantly improves quality of sleep and quality of life.

There are a variety of comfortable masks on the market to choose from to fit individual needs – including lightweight, portable devices to fit the needs of flight crew members who are constantly on the move. DME specialists are even available to help find the right fit based on various prescriptions.

To easily and individually get CPAP through insurance, some medical equipment providers will contact your insurance company and doctors to have your CPAP device and supplies shipped to your door. The entire process is quick and convenient as they handle all of the complicated tasks for you.

It is time to put a stop to aviation fatigue, as the risks of sleep apnea create a growing danger. Aside from the major financial incentive for airports and airlines, flight crews need proper rest in order to keep themselves and passengers safe. Individuals and all parties involved in aviation have a responsibility to make flying as safe as possible – for everyone in the air and on the ground. **GSW**



▶ ABOUT THE AUTHOR:

Michael Trufant is industrial markets manager at Aeroflow Healthcare, a national provider of durable medical equipment (DME) products and industrial sleep apnea screening and treatment programs.

Got You Covered

Replacement boarding bridge canopies from Estex Manufacturing allow customers to make repairs quickly while still adhering to Fire Rating Standards.

By Josh Smith

As is the case with most equipment, over time and subject to heavy use, components of boarding bridges will fatigue.

Officials at Estex Manufacturing Co. realized that with boarding bridge manufacturers focused on keeping up with production of new bridges, there was an opportunity for their company to produce replacement canopies for customers in need of making repairs.

“Over time, we have established ourselves as a reputable supplier of durable canopies, at a fair price, and shorter than normal lead times,” explains Kurt Ladd, national sales manager – aviation products at Estex Manufacturing.

For 20 years now, Estex has supplied its Loading Bridge Canopies for nearly all passenger boarding bridges in order to support airlines, airports, bridge refurbishment companies and third-party maintenance teams.



Photo courtesy of Estex Manufacturing

The company manufactures all styles of canopies, utilizing dependable fabrics that meet FAR 25.853(b) and NFPA 415 & 417 specifications.

"Each loading bridge manufacturer produces their respective bridge slightly different than their competitors. Because of this, each canopy we manufacture must be specific to the actual bridge," Ladd says.

"The most common bridge produced over the last several years requires a bellows or accordion style canopy," he points out. "This has evolved over the years when many passenger bridges included inflatable style canopies or three-piece canopies referred to as 'hook and side' canopies. Even today, we still receive the occasional request for the nearly obsolete style canopies."

Ladd says Estex continues to explore durable materials in order to increase the

lifespan of the canopies while meeting the Fire Rating Standards in place at nearly all domestic and international airports.

Estex Manufacturing Company also

supplies fascia pads, flashing adapter pads, corner pads and installation hardware kits.

"We try to support the entire canopy by supplying not just the core canopy but

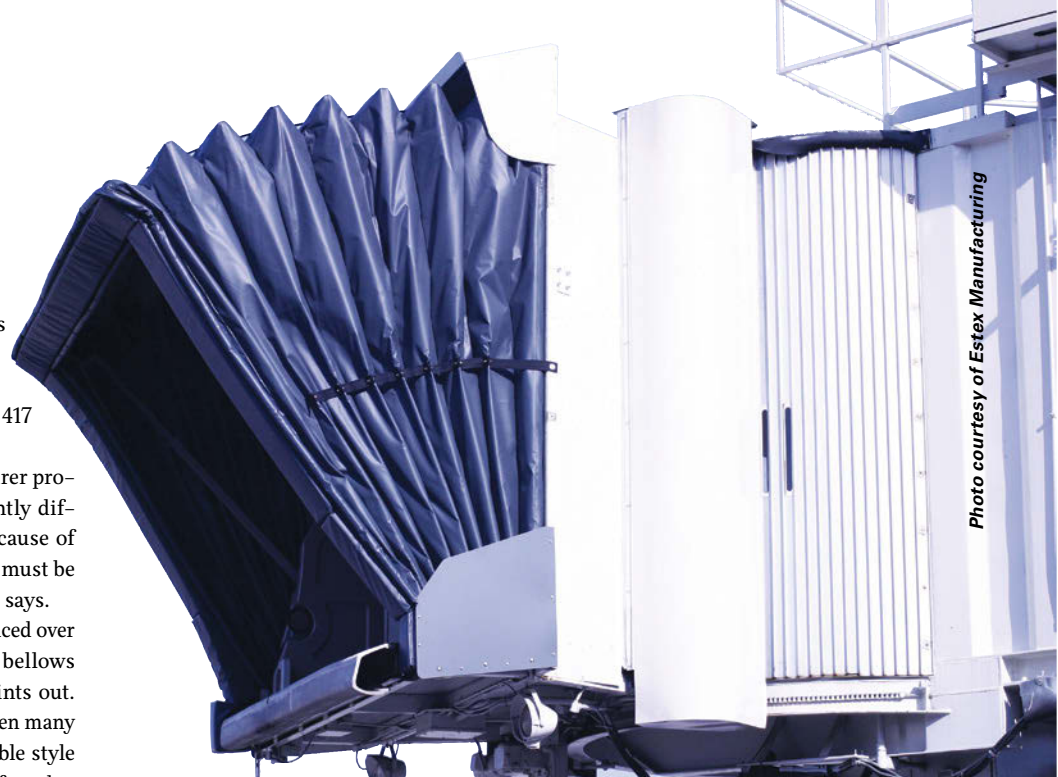


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also components," Ladd says. "Just recently, Estex began offering installation hardware to help our customers who wish to make the buying and installation process a little easier by completing the process with only one purchase order, instead of sourcing multiple suppliers."

Because Estex supplies replacement canopies, it's important to deliver a complete ready-to-install canopy to help reduce the gate's downtime.

"Because canopies can weigh 250 pounds and contain an enormous amount of material, it's important to consider items such as how we fold and box the canopies, so when the customer receives it, they can layout the canopy on top of the cab and unfold to help with the install," Ladd notes. "It's the small items, which can help save time and man-hours when it comes to installation."

Understandably, many cold weather stations do not want to replace a canopy in the heart of winter, and likewise, tourist destinations do not want to deal with canopy replacements in the middle of their peak travel season. So, Ladd says his company is flexible.

"It's all about reducing the downtime for the airports and airlines and keeping the maintenance teams safe," Ladd says.

"Many times, canopy replacements are scheduled well in advance. However, there are times when storms or other elements result in damaged canopies," he continues. "Our customers really seem to appreciate how quickly we are able to manufacture durable canopies and help get their gate back in operation."

To ensure the company is supplying the proper canopy, Ladd says Estex asks its customers to complete a measurement form for proper fitting.

"It is always possible a bridge has been slightly modified or repaired over the years, and that could impact the dimensions of the needed canopy," he points out, noting this helps prevent any surprises at installation when the gate has already been taken out of service. **GSW**



Photo courtesy of Estex Manufacturing



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Aeroservicios USA Inc.

The Model 95-145 Aircraft Boarding Stairs are compatible with multiple aircraft, including the MD80, B737, A319 to A321 and ERJ 190. The stairs feature all-aluminum construction; 45" wide steps; sliding hand rails with locks; a 5,000-pound capacity; and four heavy duty stabilizer jacks among other features.

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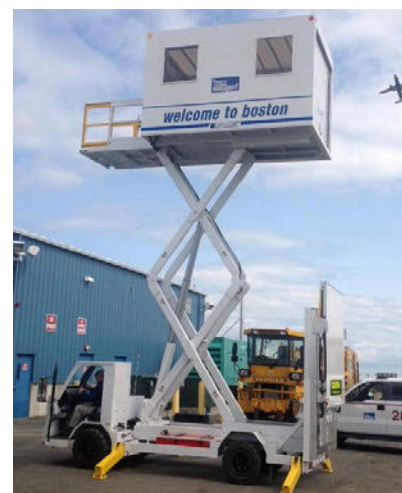
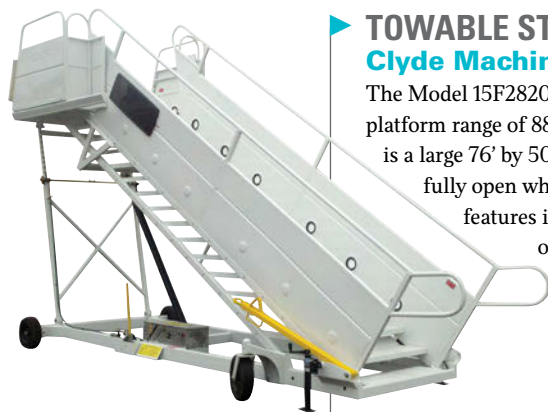


TOWABLE STAIRS

Clyde Machines Inc.

The Model 15F2820 Towable Passenger Stair has a platform range of 88' by 16'. The upper platform size is a large 76' by 50' to allow the aircraft door to fully open when the stair is in position. Other features include LED lighting with timer, onboard battery charger, battery level indicator, and optional solar-charging kit.

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APX20-DPL BOARDING LIFT

Lift-A-Loft Corporation

The APX20-DPL has a maximum platform height of 21'5" with a minimum platform height of 4'9", allowing a single unit to interface regional jets up to wide body aircraft. The fully enclosed cabin provides comfort and two windows on each side to provide natural light in the cabin. Units offer optional air conditioning, an intercom system and fold down seats. The APX20-DPL is equipped with an auto close folding lift gate, which can be raised or lowered by one person. The lift gate measures 77" wide by 84" long and can accommodate two stretchers or four wheel chairs in one lift cycle.

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PXO EXPRESS PASSENGER STAIRS

Keith Consolidated Industries

The PXO Express Passenger Stairs are towable, non-motorized passenger boarding stairs that feature a hand crank style lifting mechanism. The PXO Stairs also offer outriggers and stabilizing feet as well as sliding gates on the level platform and can be used at the L-1 or L-2 door.

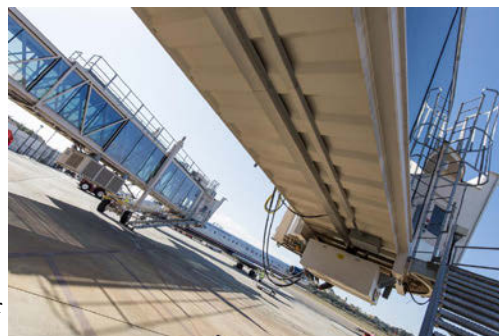
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JETWAY BOARDING BRIDGES

JBT AeroTech

Jetway Boarding Bridges come in steel, glass and smooth sided models and are suitable for serving regional jets up to double-decked jumbo aircraft. Other JBT gate equipment includes JetPower ground power units, JetAir pre-conditioned air systems and the innovative iOPS equipment monitoring service.

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B737 CREW STAIRS

Flight GSE Ltd.

The Flight GSE B737 Crew Stair mirrors the company's Passenger Stair design for the same aircraft and features a hot dip galvanized steel chassis mated to an aluminum stair and platforms. LED lighting with solar charging capabilities are included.

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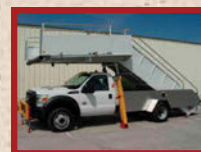
SAV5800 SELF- PROPELLED AMBULIFT

Timsan

The Timsan SAV5800 is a self-propelled ambulift for transporting reduced mobility passengers to all types of aircraft with front platform service heights from 0 mm to 5,800 mm. All aircraft doors are safely interfaced with the newly designed collision detection system of Timsan-GSE. It is designed with a trustworthy can-bus system and sturdy structure, which can carry up to eight wheel-chaired passengers and four attendants.

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PAXLIFT

Baumann S.r.l.

The PaxLift Ambulift from Baumann lifts from ground level to 8 meters, and offers integrated suspension, multi-purpose use and four steering wheels for maximum maneuverability. The PaxLift has a 100KW diesel engine for a speed up to 30km/h for ground support equipment operators. It also provides a dedicated Airport Passenger Transport design and high lifting capacities (up to 2,000kg). Additional benefits include space for six wheelchair passengers with assistance, a compact design (3,100mm height and 2,550mm width), a small turning radius (less than 7 meters) and one-man operation.

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TLD ABS-580 PASSENGER STAIRWAY

AERO Specialties

AERO Specialties distributes the TLD ABS-580 Passenger Stairway, which services door heights of 86" to 228" and handles a full range of commercial and military narrow- and wide-body aircraft. The TLD Executive Stairway offers the widest stair width and most generous platform width in the industry. The capacity rating allows for up to 74 people, expediting loading and unloading.

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MOBILE STAIRS

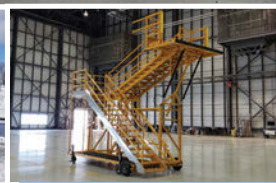
NMC-Wollard Inc.

NMC-Wollard Mobile Stairs can reach doorsills up to 228". The company offers the CMPS 170 Stair and CMPS 228, which offer a reach of 170.5" and 228", respectively. Both models are available with electric power. A quiet, efficient propulsion system offers a pro-active option. Diesel and gas power units also are available. Highly maneuverable models are easy to position, as the operator can see doorsills during approach to the airplane to make final docking and alignment simple. The rugged wrap-around steel bumpers protect units from dings and dents inherent with ramp traffic, and the company says they hold up longer in the ramp environment compared to modified pick-ups. The units are designed to ARP 836 and share design elements and parts commonality with several other NMC-Wollard products to simplify fleet maintenance and reduce parts inventory.

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FRONTBULL AMBULIFT Bulmor Industries GmbH

The FrontBull Ambulift is designed for regional and small airports and is specially developed for boarding passengers with reduced mobility. The compact FrontBull turns on a radius of only 4.65 m. A space-saving sliding door provides space for two wheelchairs and one attendant each. Additional storage space is also available as the driver's area is in the passenger compartment. Additional benefits include a lead-acid battery with 48 kWh for up to six hours of use; a lift height of up to 5.7 m; and two 17 kW three-phase AC drive motors for a maximum speed of 15 km/h.

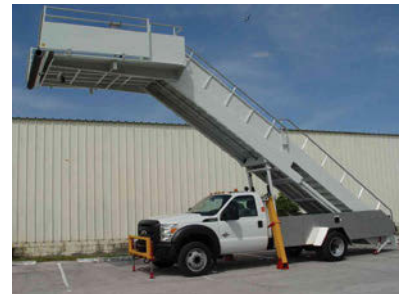
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SIDE SHIFT CAB MODEL 269L R.J. Design LLC

This side shift cab model is mainly used for larger aircrafts like A380 and aircrafts with L1 and L2 doors. It features a side shift cab that shifts left and right 18" and a leveling cab floor. This shifting makes it extremely easy to dock to aircraft doors.

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TRUCK-MOUNTED STAIRS Phoenix Metal Products

Phoenix Metal Products, Inc. offers a complete line of stairs. The model PNx-PAS228 Truck-Mounted Passenger Stair offers a door sill height from 96" down and ranges to 228" up. The chassis is a Ford F450 SD with six stabilizers.

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▶ TOWABLE PASSENGER STAIRS TBD

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▶ BAG LIFT Austral Star LLC

The Bag Lift solves the problem of gate checked baggage handling. At concourse level, bags are placed into a cart built into the walls of a PBB walkway. The gate agent closes the door and sends the cart to the ramp, where workers wheel it to the aircraft for loading.

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DPT-720 DISABLED PASSENGER TRANSPORTER Stinar Corporation

Stinar Corporation has been a manufacturer of GSE since 1946, manufacturing both chassis mounted and towable passenger stairways, catering and cabin service trucks, disabled passenger transporters, maintenance highlifts, lavatory service trucks and carts, potable water trucks and carts as well as Flight Line Tow Trucks.

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DURABLE STAIRS FAST Global Solutions

This heavy-duty stair frame can support 2,500 pounds (1,134 kilograms). The stairs can easily be towed into place and then adjusted to the best height, from 85" (2.2 m) to 152" (3.9 m) with a single-lever hydraulic system. An automatically latching "X" brace securely locks the stairs at the needed height, eliminating potential errors that can occur with manual locks. For added safety, the stairs feature a Morton non-slip walk surface and are illuminated with a battery-powered lighting system.

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APS 60 SERIES TRUCK-MOUNTED AIR STAIRS AccessAir Systems Inc.

The APS 60 Series Truck-Mounted Air Stairs are available with a wide range of options including an overhead canopy along with two air-driven canopies located at both the top and the bottom of the stairs giving passengers complete protection from the elements. Normally mounted on a Ford XL F550 series and available in gas or diesel models, the most recent edition includes an automatic handicap wheelchair lift.

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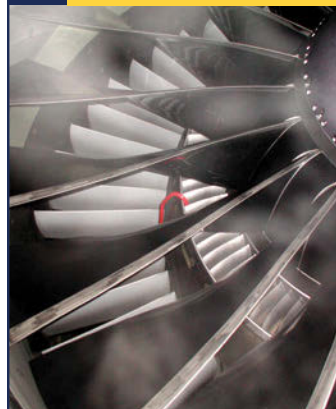
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RADIAL PASSENGER BOARDING BRIDGES

Ameribridge

Ameribridge provides new radial boarding bridges for the commuter aircraft operations market. Ameribridge acquired all rights to the Dewbridge product line in 2012, and is now taking the radial boarding bridge to an even higher level of service and reliability. Several design, engineering and component enhancements keep the new Ameribridge radial boarding bridge at the top of the aviation industry's list for safety, security and comfort in serving customers on commuter aircraft.

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NOVA SLIDE

Airport Automation

The NOVA Slide has a powder-coated steel framework with aluminum sides and a galvanized steel slider bed – strong, lightweight and durable. The curved fiberglass entry chute is ergonomically correct and meets NFPA Class 1 Flame Spread regulations.

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This Month's Featured Equipment:

PUSHBACKS

- (1) 2005 FMC Model B400 35K GVW, 28K DBP Cab & AWS
- (1) 2007 TLD, Model TMX-150-15 33K GVW, Cab & AWS

CARGO LOADER

- (1) 2006 FMC Commander 15l Wide Deutz diesel 9,100 hours

CABIN SERVICE TRUCKS

- (1) 2000 Global, CT-22-228, High-lift, International 4700 diesel
- (3) 2005 Global, CT16-168, High-lift, Ford F650 diesel

DEICERS

- (1) 1999 FMC, LMD2000 Freightliner Chassis, Open Bucket
- (1) 1999 FMC LMD2000 Sterling Chassis, Enclosed cab, First Air

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▲ Editor - Josh Smith
jsmith@aviationpros.com
920-563-1644

Welcome Aboard, Walker

With the addition of a new member, our editorial team has extra opportunity to provide the most comprehensive coverage of the ground support market.

The *Ground Support Worldwide* team has exciting news to kick off 2019.

In addition to Missy Zingsheim's promotion to group publisher, which you got to read about on Page 4, the editorial staff has recently expanded.

Walker Jaroch has joined the publication as assistant editor. His services will be shared within the AviationPros family as he contributes to *Airport Business* and *Aircraft Maintenance Technology (AMT)* in addition to *Ground Support Worldwide*.

A Wisconsin native, Walker has been a professional writer and photographer for three years. He studied writing at the University of Wisconsin-Whitewater and began his career in the newspaper industry.

Having bolstered his resume as a photographer, operating mobile portrait studios and shooting a

wide range of events, we're eager to apply his talents as a photo journalist to the aviation industry.

I trust you'll extend the same warm welcome I received to Walker as he becomes more familiar with the ground support industry at trade shows and conferences later this year. He can be reached at Walker@AviationPros.com.

With a larger staff, we as a publication seek to bring our readers more coverage of the topics that matter most to this industry. We're thrilled about this opportunity and hope that you see it making an impact on the magazines in the coming months.



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