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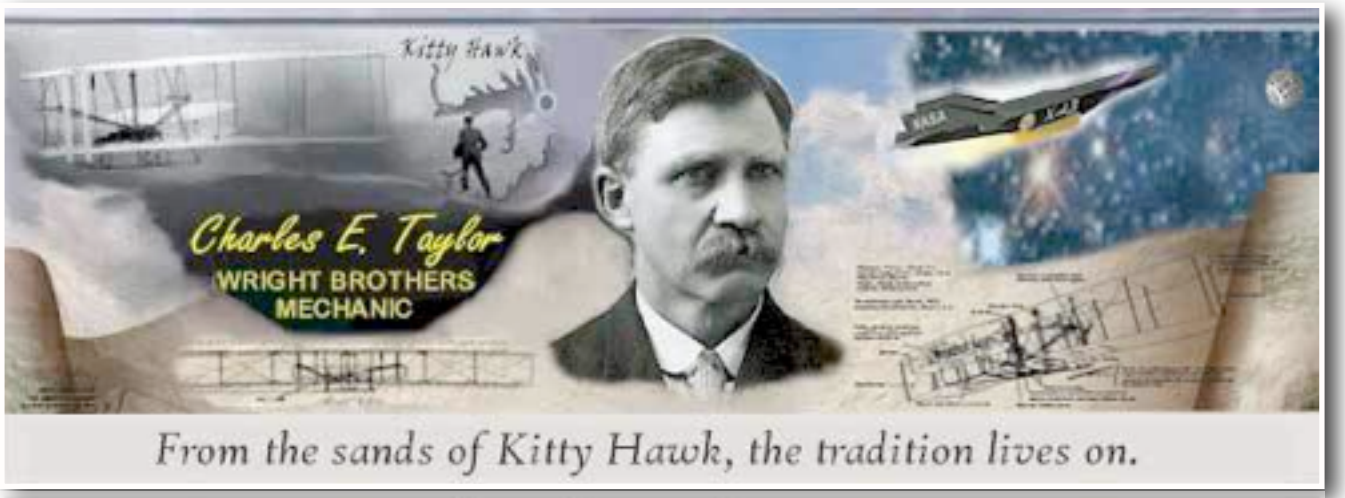

Hello all,
To subscribe send an email to: rhughes@humanfactorsedu.com
In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

AeroSafety World October 2011

Flight Safety Foundation has introduced a new approach-and-landing accident reduction (ALAR) tool. The latest product is a set of safe-landing guidelines intended to be used by aircraft operators to enhance existing standard operating procedures.The Safe Landing Guidelines were developed by the Foundation in conjunction with a team of expert representatives of aircraft manufacturers, seasoned airline pilots with training and check airman experience, aviation safety specialists and corporate aircraft operators, all with extensive backgrounds in the Foundation's ALAR effort.

The risk of an approach-and-landing accident is increased if any of the specific guidelines is not met. If more than one guideline is not met, the overall risk is greatly increased. Read the complete guidelines in the October AeroSafety World. 64 pages. [PDF 7.0M]

Feature articles and departments are now available in text only format as well as Adobe® Portable Document Format (PDF) format.

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Fighting Pilot Fatigue on Military Charter Flights

Civilian pilots who transport troops put in long hours on little sleep

Captain Craig Gatch's marathon flight schedule, which took him through 36 time zones in 11 days, finally caught up with him as he touched down in Baltimore on May 6, 2009. He was piloting 168 U.S. soldiers home from Iraq when his World Airways Boeing DC-10 bounced off the runway, then slammed down again, damaging the jet beyond repair, according to the U.S. National Transportation Safety Board. One person was severely injured. Gatch told investigators he hadn't slept well in four days while flying more than halfway around the world-fatigue that contributed to the accident, the safety board ruled.

Not enough military planes and pilots to transport U.S. troops means that 87 percent of personnel flown around the globe are carried by civilian charter airlines, a $4.5 billion-a-year business critical to the nation's war efforts. The pilots who fly for World and other smaller military-charter companies work under U.S. rules that permit extended hours with less time between flights than commercial airlines or the military's own guidelines allow. This puts the pilots and the troops at risk, says Bill Voss, president of the Flight Safety Foundation in Alexandria, Va. "Our soldiers may be expected to be heroes on the battlefield," Voss says, "but we shouldn't be relying on heroism flying them back home again."

For years, pilot unions and safety advocates have sought to reform what they call outdated work rules, particularly for charter airlines. The Federal Aviation Administration has issued a proposed rule that would reduce the number of hours pilots can fly and increase the amount of rest they get between long trips, an idea opposed by the National Air Carrier Assn., a trade group representing the charter airlines. NACA says doing so would cost its 13 member companies $3.7 billion over 10 years and require them to hire 42 percent more pilots. Military charter flights are safe, says the group's president, A. Oakley Brooks. "It's a non-problem looking for a solution.

" World Airways declined to discuss its schedules or the 2009 accident.

Fatigue is one of the most-cited factors in crashes. Three of the five formal aviation-accident reports the NTSB has issued this year concluded that tired pilots were partly to blame. In addition to the World accident two years ago, at least three other U.S. military-charter crashes have been linked to fatigue, including the December 1985 crash of an Arrow Air jet in Gander, Nfld., that killed all 256 people aboard. The NTSB also blamed fatigue in part for a 1993 crash in Kansas City, Mo., that killed three crew members, and a 1995 crash in Guantanamo Bay, Cuba.

Under the proposed new rule, workdays for crews without backup pilots or access to onboard rest facilities shouldn't exceed 13 hours, vs. today's 16-hour limit. The workday would be cut back to as little as nine hours if a pilot flies at night or makes multiple landings and takeoffs.

That kind of rest might have helped Gatch to stay sharp. On May 3, 2009, after flying from the U.S. to Hong Kong and then to the Philippines, he began a four-day swing across three continents, a period during which he became ill and had limited opportunities for rest, according to NTSB records.

The Administration hasn't said when it will release the new rule or what precisely it will say. Airline trade groups and unions continue to lobby for changes to the FAA proposal. Voss believes the Pentagon, too, should step up and side with the pilots, who will soon be flying thousands of troops home from Iraq. "The military is totally complicit in this," Voss says. "They knowingly contract for these flights that they could not legally fly themselves."

The bottom line: Pilot fatigue, linked to four accidents on chartered flights carrying troops, is one of the most cited reasons for mishaps.

Tailoring Fatigue Management Programs to Specific Work Domains

Fatigue has traditionally been managed by prescriptive duty time and rest requirements. Although such approaches reduce fatigue related conditions, they do not consider human physiology (sleep and circadian systems) in the regulation of alertness and sleepiness throughout the 24-hr day. The assumption underlying prescriptive approaches in most operational environments is that fatigue accumulates in a linear manner and ‘time on task’ is the best predictor of fatigue.

However, science has shown that the brain's sleep and circadian systems interact in a non-linear fashion and are continuously challenged by extended duty days, irregular and unpredictable schedules, early report times, high workload and other environmental factors. Additionally, prescriptive approaches do not allow operational complexities to be addressed on a case-by-case basis.

There is a need to develop scientifically valid fatigue-management approaches. A Fatigue Risk Management System is a non-prescriptive approach that addresses unavoidable physiological challenges as well as operational complexities to minimize sources of fatigue-related risk. It includes a combination of processes and procedures that require continuous enhancements to identify, manage and reduce the risk of fatigue with continuously changing operational demands.

Study Cites Most Sleep-Deprived Cities in America

A new ranking conducted for Sleepy's, The Mattress Professionals, reveals which US cities are most in need of extra sleep. According to the company, the Most Sleep-Deprived Cities list is based on an independent analysis of individual sleep habits as reported in an annual study of more than 350,000 adults by the Centers for Disease Control and Prevention.

The data reveals the following 10 cities as America's most sleep-deprived:

1. Detroit
2. Birmingham, Ala
3. Oklahoma City
4. New Orleans
5. New York
6. Cincinnati
7. Louisville, Ky
8. Raleigh, NC

9. Columbus, Ohio
10. Boston

The study also reveals the cities reporting the most sleep, with the majority located in California. The most well-rested reside in San Diego; Dallas; Richmond, Va; San Jose, Calif; and San Francisco.

Japan urges ANA to take steps to prevent another mid-air roll

Japan's transport ministry has urged All Nippon Airways to take measures to prevent a repeat of an in-flight error that sent one of its planes into a violent mid-air roll and left it almost belly up, Kyodo News reports.

Futoshi Osada, director general of the Ministry of Land, Infrastructure, Transport and Tourism's Civil Aviation Bureau, told President Koichi Uchizono of Air Nippon Co - a unit of ANA - to take "appropriate action" and report back, the ministry said.

"It is really deplorable that the incident occurred as it threatened to undermine public trust in the safety of the public transportation system," Osada told Uchizono during a meeting at the ministry.

Two crew members were slightly injured and six passengers complained of feeling unwell after their plane rolled sharply, descending rapidly and banking to a near-inverted altitude.

117 passengers and crew were on the flight from Okinawa to Tokyo on September 6.

According to Japan's Safety Board, the error happened when the co-pilot mistakenly turned the rudder trim switch instead of the cockpit door switch, as he tried to let the captain back in after taking a toilet break. The plane landed safely in Tokyo.

DC-9-50 Nearly Loses Engines On Hard Landing

On Sept. 26, a McDonnell Douglas DC-9-51 operated by Aeropostal landed at Puerto Ordaz, Venezuela, with enough force to crack both engine pylons at the airframe, leaving them dangling at the rear fuselage sides. None of the five crew and 125 passengers were seriously injured and all were evacuated onto the runway after the aircraft was stopped. The jet, registered YV136T, is more than 35 years old. The flight, VH 342, according to the Aviation Safety Network, had operated from Caracas and landed at Puerto Ordaz in a manner that has been described as "very hard." This is one you really have to see to believe. A passenger told El Nacional that the impact with the runway had been hard and that afterward there was a slight burning smell in the aircraft. Passengers were reassured by the crew and aided with evacuation. The aircraft was later towed from the runway. It was a regularly scheduled domestic flight. No local weather reports were immediately available. According to El Universal of Caracas, the investigation is being initiated by the JIAAC, the civil aviation accident investigation agency of Argentina. The incident aircraft was fitted with Pratt & Whitney JT-8D-17A (HK3) engines. It was first operated commercially by Finnair from October of 1976 through March of 1984 and has since served with Alisarda, Linea Aeropostal Venezolana, and Aeropostal.

Virgin pilot blown over by Qantas jet

A pilot suffered serious injuries when the rear aircraft stairs of his Virgin plane was toppled by the engine thrust of a Qantas 747 jumbo jet.

The Virgin Australia first officer was undertaking pre-flight checks with his plane due to depart for Bali, when a nearby Qantas plane taxiing on the runway caused the drama, Fairfax reports.

The force of the Qantas jet's engines caused the rear stairs of the Virgin 737 to blow over with the pilot on deck, causing him to suffer leg and arm fractures. Safety authorities are investigating the incident, which occurred this morning at Brisbane's international airport.

"Our plane was in the right place at the right time," a Virgin spokesperson said. "The one dynamic which was different was the thrust level of the Qantas plane which caused the stairs to blow over."

Qantas insists there was no breach of protocol on the part of its pilots.

US Airway' Take 5 Approach

The holiday season is a time for celebration, family gatherings, shopping, travel and myriad other distractions that can cause the focus of even the most dedicated technician to waver. It really doesn't matter what your industry or position, in the two-month period between Halloween in October and New Year's, most of us have a portion of our minds on other things-and technicians are no exception.

Sure, distraction is always an issue in the hangar, so much so that it is one of the 'dirty dozen,' or the 12 most common root causes of human error in aviation maintenance. But the problem can spike during the holidays because the number of distracters rises exponentially and because almost everyone in the workplace is affected at some level.

Family issues, travel challenges, holiday debt and more can pile up so that a technician doing, say, a visual inspection on a wing has his/her eyes on the flaps and his/her mind on the visiting in-laws.

"We wanted to come up with something to get technicians' heads in the game during the holiday season," says Tama Mohelnitzsky, director, ground support equipment at US Airways. Noticing a "slight uptick" in incidents during the holiday period, Mohelnitzsky, along with corporate safety director Joe Nester, last year devised a program to address the issue head on.

The program, dubbed "Take 5," was part of a broader series of initiatives aimed at continually raising the safety bar in US Airways maintenance.

Mohelnitzsky came up with the Take 5 moniker upon spying a Take 5 candy bar one day. She realized the candy bar could be a tangible, memorable way to remind technicians to stope and re-focus on the task at hand if their minds started to wander. It also lent itself to an easier digestible list of five reminders-in addition to being an easily digestible treat.

At the beginning of the 2010 holiday season, US Airways held a series of crew briefings to address the issue of holiday distraction and to hand out the Take 5 bars with these accompanying reminders:

+ Understand the task at hand (i.e., don't let repetitive work lull you into not reading instructions carefully before each task).

+ Know the risks (i.e., for every task, know the potential risks ahead of time and mitigate them).

+ Follow and complete all paperwork (i.e., don't simply glance through paperwork and assume you know what;s on it).

+ Follow all policy and procedures; when in doubt, ask (i.e., resist the temptation to take shortcuts such as driving under the wing instead of around it).

+ Protect yourself, your co-workers, the aircraft and the equipment (i.e., don't give tacit approval to an unsafe act by hurrying past it).

Yes, they were all basic reminders, but that was the point. By refocusing on basics such as following procedures and thinking about safety at all times, technicians were more likely to stop themselves from taking a shortcut or to call out a potential safety hazard they might otherwise ignore, if, say, they were anxious to leave for the day.

Could US Airways simply have issued these reminders and save itself the trouble of distributing candy bars? Perhaps, but the effectiveness would have been greatly diminished.

As most safety leaders will tell you, hanging a poster or handing out a flyer has minimal impact. However, “if you give [technicians] something different, something they’re not used to receiving, there reaction is, “What’s this for?” says Nester. “Now you’ve got their attention and they’ll tend to read what’s in front of them and hopefully in five steps will stay with them throughout the holidays.”

It worked. During the 2010 holiday season there were zero incidents compared with a bump in the numbers during previous years. In fact, thanks to numerous short, focused initiatives such as Take 5, US Airways had only one incident during the second half of 2010 compared to “a spike in incidents” during the first half of the year, says Nester.

Still, he adds that the airline has no plans to repeat Take 5 during the 2011 holiday period as the repetition would erode the program’s effectiveness.

“Safety is always changing. You can’t put a safety program in place and be done because programs become stale,” Nester explains. “You always have to find new ways of presenting things to get employees’ attention. We are constantly looking at changing programs and at different ways of communicating so we are capturing the attention of our technicians.

New Human Factors Recurrent Course for Instructors to be Available in 2012

Over the last year or so Bob Baron, Ph.D has been getting a lot of questions about recurrent training options for HF instructors. To date I have been offering a generic recurrent course that is more geared toward line maintenance personnel. However, after speaking with a number of HF instructors, there appeared to be a lack of recurrent training available for those of you who teach HF and already a significant understanding of the basic concepts.

Now my company will be offering, on a once yearly basis in October in Myrtle Beach, SC, an HF recurrent course specifically designed for HF instructors that will far exceed the “same old same old.”

Many of you are repeat clients and have been attending my regular HF recurrent course every two years and I sincerely appreciate your continued business. With the introduction of this new course on a once per year basis it will allow me to get more people together all in one place all at one time.

If you are on a two-year recurrent training schedule then you may need to make an adjustment to plan for your recurrent in October every two years. The first HF Recurrent course will be offered in October 2012 with the exact dates TBA (get our up-to-date course schedule at www.tacgworldwide.com/sched.htm).

This course is designed specifically for those people that train others in human factors subjects. It is assumed that attendees already have a solid foundation of human factors knowledge and therefore will be able to contribute significantly to the course objectives which include high-level thinking, sharing of knowledge, best practices and recommendations. With a core focus on current HF issues as well as training methods and techniques this course is highly interactive and conducted in a workshop fashion. Attendees are required to make a short presentation in order to facilitate a group learning and sharing experience.

As a side note, TACG now has an Human Factors Group page on LinkedIn. You can join our discussion and pick (what's left of) my brain at http://www.linkedin.com/groups?gid=4080572&goback=.gna_4080572

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