

Aviation Human Factors Industry News

Volume VI. Issue 24, July 16, 2010



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:

★NTSB expresses concern about sterile cockpit violations

★NTSB Warned That Future Pilots May Not Be Up To Snuff

★FAA Publishes Advance Notice of Proposed Rulemaking On SMS

★Self Destructive Behavior

★PRESSURE

★Rhythm Of Our Effort - A Must See!

★Life gets easier later

★Sleeping Passenger Locked In Airplane For Nearly Four Hours

★Caffeine Reduces Mistakes Made by Shift Workers

★Concorde May Fly Again

NTSB expresses concern about sterile cockpit violations

Recent non-fatal accidents involving US carriers are causing the National Transportation Safety Board (NTSB) to question **if larger issues** exist in the flight deck environment that require more scrutiny.

Board chairman Deborah Hersman during a speech recently at the Regional Airline Association convention in Milwaukee, Wisconsin said while the Colgan Air flight 3407 crash of a Bombardier Q400 in February 2009 garnered significant attention, NTSB is **seeing other incidents** that are triggering questions about **sterile cockpit rules** being routinely violated.



NTSB next month plans to consider a report examining one of those incidents, a runway excursion of a Continental Airlines Boeing 737 at Denver in 2008.

"We'll have more to say on that after the Board adopts its finding and recommendations," says Hersman.

She also is expressing concern about the American Airlines 737 crash last December in Jamaica. The aircraft landed long and ran off the end of the runway, braking into several parts. Stressing to the audience that **lessons learned** from the Colgan investigation apply to all air carriers, not just regional airlines, Hersman says accident investigations are not "the time for polite words".

Hersman says she stands by a comment she made during the Colgan hearing that it felt like the movie "**Groundhog Day**".

"What I meant was that the issues we discovered in our investigation were nothing new. We've long known about them, and in fact NTSB has long-standing recommendations on many of them," she explains.

Hersman also acknowledges a big problem the industry faces is "the slowness and unpredictability of the regulatory process. You should be able to look to regulations for guidance on best practices, yet the fail time and again to keep pace".

NTSB's chairman says she's "disappointed to hear that the **flight and duty time notice of proposed rulemaking** is now scheduled to be published in September".

Noting industry is facing a third delay in the proposed rule's release in the USA Hersman says: "What started out of the blocks as a record-setting 200 meter dash has now begun to look more like a steeplechase event."

NTSB Warned That Future Pilots May Not Be Up To Snuff

There **are indications** that future airline pilots will be less experienced, less ethical, and in short supply, a panel of experts told an aviation safety forum on recently, The Associated Press has reported. While there are more pilots than airline jobs today, the opposite is likely to be true as airlines recover from the economic recession and start hiring again, experts on pilot hiring and screening told the National Transportation Safety Board. The coming shortage may likely fall heaviest on regional airlines, who usually employ less experienced pilots at reduced salaries.

There are approximately **54,000 pilots working for major airlines**, almost **19,000 regional airline pilots**, and approximately 2,500 qualified pilots available for hire in the US today, said aviation consultant Judy Tarver, an ex-pilot recruiter for American Airlines. She estimated that airlines will need to hire approximately 42,090 pilots throughout the next 10 years because of retirements and expected industry growth.

Panel members said that there are much fewer military pilots leaving for jobs with airlines. **Fewer college students say they want careers in aviation** for the reason that they see it as an **economic dead end**, and airlines are having to compete with corporations more and more for pilots.



The remarks arrived as the safety board started a three-day forum on how to get more pilots and air traffic controllers to consistently **strive for a high level of professionalism**. Throughout the past year, a series of high-profile incidents have occurred in which the conduct and judgment of pilots and controllers have been called into question, as well as the crash of a regional airliner near Buffalo, New York that killed 50 people.

The safety board said the crash happened following the plane stalling due to the pilot pulling back, rather than pushing forward, on a key piece of safety equipment. But they also **cited a series of errors and unprofessional conduct** by the pilot and first officer leading up to the crash.

Paul Rice, a pilot and spokesman for the Air Line Pilots Association, said he was doubtful that a willingness to break rules and flout authority among younger pilots is any different compared to past generations of young pilots.

However, he said that he shared the panel's concern that there will be a **lack of experienced pilots at regional airlines**, which account for half of all domestic flights and are the only scheduled air service to approximately 400 communities.

Roger Cohen, president of the Regional Airline Association, said that any pilot shortage won't affect safety on account of pilots being trained, certified, and tested.

Airline travel today is safer than ever before, but the Buffalo crash and other incidents are warning signs that safety may be eroding due to an attitude of "**casual compliance**" by a minority of pilots, said Tony Kern, an ex-Air Force lieutenant colonel and author of five books on pilot performance.

FAA Publishes Advance Notice of Proposed Rulemaking On SMS

The Federal Aviation Administration has **started laying the groundwork** for a future **Safety Management Systems (SMS)** rulemaking that will affect everyone who provides aviation services or products under 14 CFR Parts 21, 119, 121, 125, 135, 141, 142, and 145. On July 23, 2009, the FAA an advance notice of proposed rulemaking (ANPRM) and request for on Safety Management



Systems (SMS). This ANPRM does not include any specific proposals for a rulemaking. Instead, **it invites comments** from anyone who has voluntarily established, or who is in the process of implementing an SMS within their operations. Specifically, the ANPRM lists some 17 questions, the answers to which might provide the FAA some guidance in developing a final proposal.

The FAA has established an Aviation Rulemaking Committee (ARC) which will review the comments received in response to the ANPRM as part of its tasking to make recommendations to the FAA on a subsequent SMS Rulemaking. Comments in response to the ANPRM must be submitted on or before October 1, 2009.

<http://www3.verticalgateway.com/portals/12/rotornews/July%2009/SMS%20ANPRM.pdf>

Self Destructive Behavior

Airline Fires 20 Over Internet Porn

It's probably not what they envisioned when they named the airline "Virgin Blue", but the Australian carrier has reportedly **fired 20 managers and staff** at the Sydney and Brisbane airports for **using airline computers** to view and trade pornographic images. The airline said all of the employees had ignored at least one warning about breaching the company's **code of conduct**, and had been "terminated."

The airline had been investigating at least twice that many people, according to the Sydney Morning Herald. Sources speaking on condition of anonymity said those let go were primarily baggage handlers who would use computers in offices and staff rooms to watch the illicit material, and then swap the items they considered "good."

The source said there were **managers present at the time**, and they were actively engaged in the violations of company policy. The material was considered "hard core triple-X," according to the source.



"We absolutely do not tolerate any misconduct," said Virgin Blue spokeswoman. She added that the workers involved did not have direct contact with customers. She said that as many as 40 people had been investigated, so many that they could not all be suspended because there was not sufficient back-up staff to fill the positions while they conducted the investigation.

PRESSURE

Pressure is an important factor in the safe operation of pipelines and process industries. Pressure is necessary for flow. Pipeliners want to optimal flow. This requires the right amount of pressure and controls on the pressure so it does not exceed maximum limits. A pipeline system has devices that transmit, monitor, control, and adjust pressure. There are even devices that are designed to shut down the system and relieve pressure if it gets above the safe settings. These **safety devices** are often called "fail-safe" devices. People are learning, from the Gulf of Mexico Deepwater Oil Spill, what happens when a fail-safe device fails. The pressure is difficult to control and can cause significant damage.



Pressure on people can also cause damage. The effects of pressure on people differ. Pressure to perform can be good and bad. The correct amount and the right types of pressure help people achieve optimal performance. It is when **we reach our limits** that pressure can have negative effects. Although the brain and body provide warning signals, people **will ignore the signals** for many reasons. Our systems may not shut down until there is a catastrophic failure. People do not have fail-safe devices. The results could negatively affect our health. Therefore, it is important to understand both the causes and effects of pressure. Avoid this insidious **"Dirty Dozen" factor**.

Self-Imposed

Imposed by Others

Pressure may be self-imposed or imposed by others. I always think about the saying of the cartoon possum, Pogo, who famously said, “We have met the enemy and he is us.” Think about the different types of pressure you might impose on yourself. In my family life, I desire to be an excellent husband, father, grandfather, son, father-in-law, brother, son-in-law, nephew, cousin. In my personal life, I want to be an excellent disciple, citizen, friend, and the list can go on and on. We all have professional and personal roles and goals that are important to us. It is beneficial to challenge our limits, but **we need to recognize that limits exist**. When I work shiftwork and neglect sleep for an event I deem important, this decision can cause me to be less alert. Personal pressure, even if it is based on good intent, can be harmful. **Don't be your own worst enemy**. Discuss with your family the importance of setting priorities, based on what is truly valuable.

It is easier to recognize pressure imposed by others. The responsibilities of work come with inherent pressures. Look at actual job postings for pipeline controllers.

People who want to work in this position know the job requires:

- ☒ Must possess the ability to handle multiple tasks and stress in a fast-paced business environment.
- ☒ Flawless operation of automated systems and the ability to remain focused in highly stressful situations.
- ☒ Must have the ability to work in a fast paced environment, process work rapidly, set priorities, work under pressure.

Consider these ways to avoid the effects on pressure:

- ☒ Prioritize. When we are faced with several tasks, choose the most critical and delay others.
- ☒ Plan ahead. Use planning and time management skills on each shift and for each set of work days.
- ☒ Learn your limits. Our mental and physical limits are real. These will affect how we act and react to pressure.

- ☒ Set realistic goals and expectations for yourself and others. Safety should be the ultimate concern.
- ☒ Do not pressure others or yourself to exceed safe limits.
- ☒ Do not create a false sense of urgency.
- ☒ Communicates your concerns, early in the process before pressure becomes a concern.
- ☒ Ask for help. Asking is difficult for some of us, but others are willing to help prevent errors and accidents.

Rhythm Of Our Effort - A Must See!

What you will see, is a video showing **air traffic around the world for 24 hours**, taken from a satellite. The yellow dots are aircraft in the sky during a 24 hour period. Stay with picture. You can see the light of the day moving from the east to the west, as the Earth spins on it's axis. Also you will see the aircraft flow of traffic leaving the North American continent and traveling at night to arrive in the UK in the morning.



Then you see the flow changing, leaving the UK in the morning and flying to the American continent in daylight. It is a 24 hour observation of all of the large aircraft flights in the world, condensed down to about 2 minutes. From space we look like a **bee hive** of activity.

You could tell it was summer time in the north by the sun's foot print over the planet. You could see that it didn't quite set in the extreme north and it didn't quite rise in the extreme south.

With this 24 hour observation of aircraft travel on the earth's surface we get to see the daylight pattern move as well.

Watch the day to night..... Day is over in Australia when it starts.

www.youtube.com/watch?v=-9r8hgWulwA&feature=related

Life gets easier later

They don't call them the golden years for nothing. A recent study by researchers at Stony Brook University found that **after age 50**, people feel happier, **less stressed**, and less worried than their in the full bloom of youth, say Scientific American. That finding emerged from a Gallup survey of 350,000 Americans from all parts of the country.



The results showed that **happiness and enjoyment declined between ages 20 and 50**, but increased steadily after 50. **Worry and stress** start rising in the 20's but fall off sharply after age 50. The patterns were similar for men and women, and held regardless of whether a person was employed, married, or has children in the house.

Older people may be 'more effective at regulating their emotions than younger adults,' says psychiatrist and study author Arthur Stone, or they may simply forget negative experiences more quickly. Whatever the reasons, says Stone, "If you were to do a survey and say, 'How many of you would like to be 25 again?' you don't get a lot of takers."

Sleeping Passenger Locked In Airplane For Nearly Four Hours

Imagine that you woke up following a flight to find that the airplane was empty, dark, locked, and parked for the night. That was exactly the situation in which 36-year-old female found herself after a recent flight from Detroit Philadelphia. She says she was booked on a flight that was supposed to arrived in Philly after a brief stop in DC. but her leg from DC



to Philadelphia was delayed, and after leaving Detroit at 0600, she didn't arrive at her final destination **until after midnight**.

To make matters worse, **she didn't know**. She was **asleep** in the cabin, and reportedly didn't wake up as the other passengers deplaned.

CNN reports that when the **cleaning crew** found her about four hours later, they alerted TSA, and she was "wrongfully detained and interrogated," according to her complaint.

She has filed a lawsuit against the airline. She is seeking between \$25,000 and \$75,000, alleging negligence, infliction of emotional distress, false imprisonment, and breach of contract.

A airline spokesman said that the **normal procedure** calls for flight attendants to "do a sweep of the aircraft to ensure there are no passengers left on." Fred Oxley said the internal investigation would focus on whether that sweep was done.

Sleep Review

THE JOURNAL FOR SLEEP SPECIALISTS

Caffeine Reduces Mistakes Made by Shift Workers

Caffeine can help those working shifts or nights **to make fewer errors**, according to a new study by Cochrane researchers. The findings have implications for health workers and for

any industry relying on shift or **night work**, such as transportation. The researchers reviewed data from 13 trials studying the effects of caffeine on performance in shift workers, mostly in simulated working conditions. Caffeine was given in coffee, pills, energy drinks, or caffeinated food. In some trials, performance was assessed by tasks such as driving, whereas in others it was assessed by neuropsychological tests. Caffeine appeared to **reduce errors compared to placebos or naps**, and improve performance



in various neuropsychological tests, including those focusing on memory, attention, perception, and concept formation and reasoning.

None of the trials measured injuries directly, but improved performance may translate into reduced numbers of injuries caused by sleepiness, according to researchers. "It seems reasonable to assume that reduced errors are associated with fewer injuries, although we cannot quantify such a reduction," says lead researcher Katharine Ker of the London School of Tropical Medicine in London, UK.

The average age in most trials was between 20 and 30 years, and thus, because the effect of disruption to the circadian rhythm varies with age, there is [still a need for more research](#) on how caffeine affects alertness in older workers. The study also finds that there is a need for research to explore the effects of caffeine compared to other measures in order to reduce errors made by shift workers.

Concorde May Fly Again

Test Shows Concorde Engine Is Sound

It's been seven years since the supersonic Concorde was grounded, but a successful engine test over the weekend has raised the hopes of Concorde fans that at least one of the fleet will fly again. One of the four Rolls Royce engines on Concorde Sierra Delta, which has been on display at the Le Bourget [Museum of Air and Space](#) near Paris since 2003, a seven-hour engineering exam on Saturday. The [boroscopic test](#), using remote cameras and video to inspect the insides of the engine, showed it to be in perfect condition, Ben Lord, of the UK's [Save Concorde Group](#), told AVweb on Tuesday. Lord said he hopes the positive results will lead to further testing, then re-lighting the engines for ground taxi and eventually a return to flight. The French group Olympus 593 arranged for the test, and they have set a goal of seeing Concorde fly for the [opening ceremony of the 2012 Olympics in London](#).



The test was performed by former Concorde [technicians and maintenance workers](#) who are among the founding members of Olympus 593. Sierra Delta's other three engines will each undergo a similar test over the next few weeks, Lord said. He added that reaction to the news about the engine

test has been extraordinary, revealing the widespread desire to see the aircraft back in the air. Save Concorde gained 1,000 new members over the weekend, along with "a great amount of Twitter coverage," he said. "It has demonstrated that the love of Concorde has far from diminished and is still out there." Photos and some short video clips of Saturday's inspection can be viewed online.

http://heritageconcorde.com/?page_id=2663

Picture This!

Hands Free!

What is great about this low-cost bit of telecommunications technology is that you can dial and honk at the same time, thereby both discussing crucial information with whoever you're chatting with (where you are, where they are, what they are doing later, what time you'll be back home or at work, do they need a loaf of bread or a quart of milk, etc.), and also letting other drivers know how crappy their driving is, **possibly due to them not paying attention.**

Brilliant.

