Aviation Human Factors Industry News

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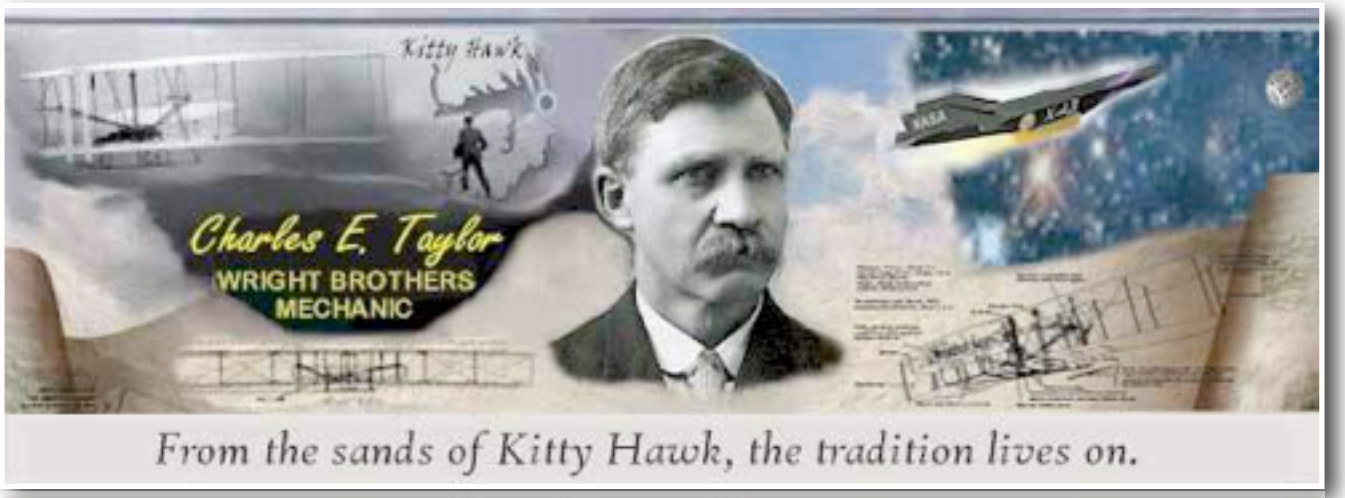
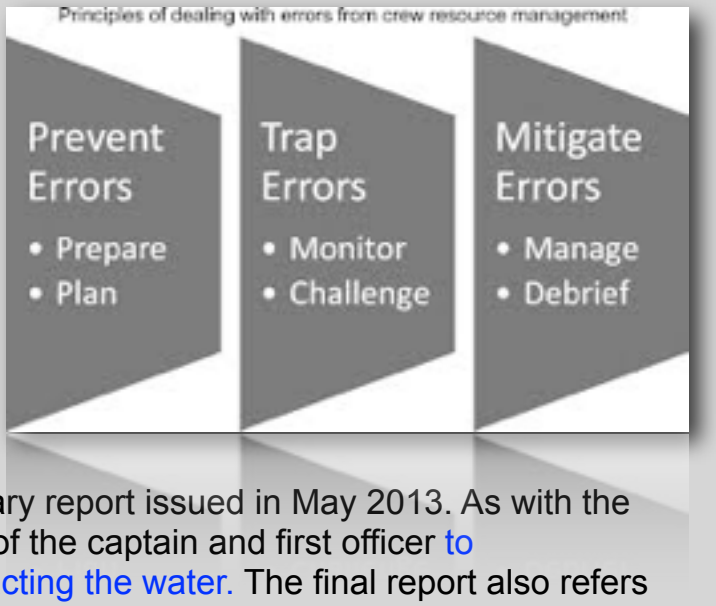


Hello all,

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:

Lion Air crew castigated in Bali crash final report



The final report into the crash of a Lion Air Boeing 737-800 aircraft on short finals to land at Denpasar's Ngurah Rai International airport on 13 April 2013 has identified several safety issues around the skill of the pilots and the carrier's emergency response procedures.

The National Transportation Safety Committee (NTSC) report retains the same chronology as the preliminary report issued in May 2013. As with the earlier report, it highlights the failure of the captain and first officer to communicate effectively prior to impacting the water. The final report also refers to CCTV footage, which shows the extent of the rainy weather immediately prior to the crash, which prevented the flight crew from seeing the runway.The first officer, who was flying, mentioned that the runway was not in sight as the aircraft descended through 900ft on final approach after an uneventful flight from Bandung. Although the aircraft's automated systems issued a "minimum" warning at 550ft, the crew disengaged the autopilot and autothrottle, and continued the descent flying manually.

At 300ft, the report reveals that the cockpit voice recorder picked up a sound consistent with rain hitting the windshield, although there was no sound of windshield wipers. When the 737 had descended to just 150ft, the captain took control of the aircraft, while the first officer again said that he could not see the runway.

During interviews, the captain maintained that he was confident the runway would appear at any moment. It was only when the enhanced ground proximity warning system called a 20ft height alert that the pilot commanded a go-around but, just 1s later, the aircraft impacted the water. Though there were no fatalities among the 101 passengers and seven crew, four passengers suffered serious injuries. The aircraft, bearing registration PK-LKS, was a complete hull loss.

“The (pilot in command’s) expectation that he would be able to see the runway after the rain can be considered as inability to accurately perceive what was going on in the flight deck and outside the aircraft,

including the thunderstorm formation that was observed at an aircraft altitude below 900ft. This might be due to under utilized resources available in the flight deck and the limited visibility due to the hazy conditions which made the pilot unable to see the thunderstorm formation properly."

The report makes it clear that the captain's go around decision came far too late. It notes that the bare minimum altitude for a 737 go around is 50 feet, as 30 feet of altitude are lost when executing the maneuver. The maneuver also demands three seconds to executive effectively.

After the aircraft came to rest in the water, the report shows that the crew handled the evacuation poorly. The first officer initially attempted to evacuate passengers through the right cockpit window. When this proved unviable, he conducted the evacuation through the right-hand service door.

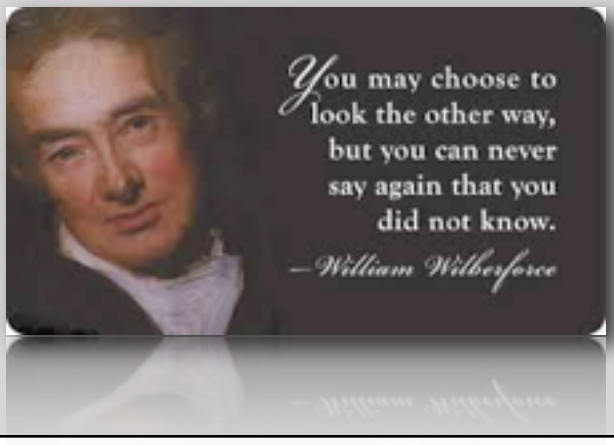
Meanwhile, a flight attendant on the left side of the aircraft was unable to detach a life raft from the aircraft, as her only training for this exercise consisted of watching a video.

The report lists 13 recommendations for five parties including Lion Air, airport operator PT Angkasa Pura I, and the Directorate General of Civil Aviation.

The key recommendations, however, focus on ensuring the pilots employ effective crew resource management skills, hand flying skills, and emergency procedures.

DGCA, SpiceJet turned blind eye to repeated lapses by senior pilot

In what appears to be a clear violation of flight safety norms, both the Directorate General of Civil Aviation (DGCA) and low cost carrier SpiceJet disregarded official reports of lapses by the latter's pilot on two occasions. Even more shocking is the fact that the pilot in question, Capt Rahul Malhotra, was promoted twice after the first incident involving a hard landing at Jammu airport.



In the Jammu incident on October 4, 2013, Malhotra was responsible for a hard landing of the Bombardier Q400 turboprop aircraft that he was piloting. However, in the pre-flight check before departing for the next destination, Malhotra did not report the incident while completing the tech log sheet, which he got through with in a mere 10 minutes.

Documents available with Mumbai Mirror show that on October 15, 2013 -- ten days after the hard landing incident -- the operations group of the Civil Aviation Safety Advisory Council (CASAC), a government appointed aviation safety body, had written to then director general of civil aviation, Arun Mishra, detailing the incident.

The aircraft then operated four more sectors before reaching Chennai on October 5, where its Digital Flight Data Recorder (DFDR) was decoded by SpiceJet engineers, the CASAC report to DGCA said.

During this, it was revealed that there had been a hard landing, and an appropriate check was carried out which confirmed the same.

The CASAC report made it clear that the violation of safety norms was disregarded by the three senior SpiceJet pilots deputed to DGCA as Flight Operations Inspectors (FOI) -- Capts NP Puri, Sandeep Verma and Vishal Sahni - as well as the airline's Chief Pilot, Capt Virendra Malhotra, who happens to be the offending pilot's father.

Over the next several months, Rahul Malhotra was promoted as a check pilot was cleared twice -- first as a trainer in 2013 and again as a synthetic flight instructor (SFI) for simulator based training in August 2014 -- by DGCA. In an earlier incident on February 6, 2013, CASAC had named Malhotra in its report to DGCA for overshooting the runway at Allahabad airport.

The reports submitted to DGCA on October 15 and 16, 2013 along with proof of the cover-up by SpiceJet by former CASAC member Capt Mohan Ranganathan were never entertained by Mishra.

According to the CASAC complaint, the landing recorded a vertical acceleration of 2.18g, considered severe for the aircraft. "The pre-flight inspection was carried out by the captain and the flight was cleared without any entry in the tech log sheet for heavy landing. This is a clear violation and appears to have been done with the complete knowledge of the airline top brass," Capt Ranganathan told Mumbai Mirror.

Documents available with Mirror show that the pre-flight inspection was completed by Capt Malhotra within ten minutes of the aircraft's landing. "The aircraft was ready for passengers to deplane after landing at 9.57 am, after the hard landing at Jammu. The captain could not have completed the checklist and paperwork before then. Yet, he has carried out the pre-flight inspection schedule and signed the tech log at 10.07 am," Ranganathan added.

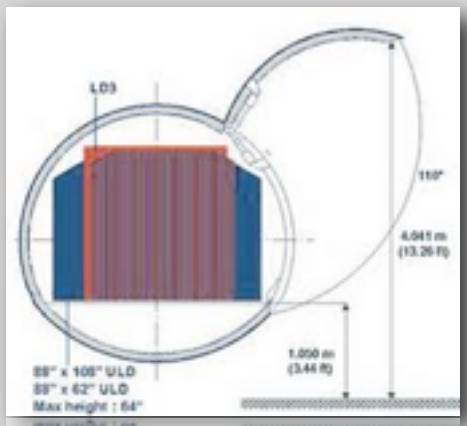
The remarks column in the tech log after the pre-flight inspection reads 'NIL', while the work order for carrying out the hard landing checks on October 5, 2013 by Spicejet's engineering department mentions that the aircraft made a hard landing of 2.18g. This was pointed out by CASAC as proof.

"It appears efforts were underway to cover up this event. By not reporting a hard landing where structural damage could have taken place, and continued operation of the aircraft on regular passenger service without the mandatory checks points to a serious deficiency of safety concept in the airline and the integrity of DGCA's on-deputation FOIs, who belong to the airline," Ranganathan said.

Spicejet, in a statement, said, "The alleged incidents in question occurred in early to mid 2013. SpiceJet is investigating the reports in full cooperation with the DGCA. At no time was safety compromised, and allegations that aircraft flew while not airworthy are completely false. SpiceJet has had an impeccable safety record in its nine years of operation."

FAA Proposes $132,425 Civil Penalty Against Mountain Air Cargo

The U.S. Department of Transportation's Federal Aviation Administration (FAA) is proposing a $132,425 civil penalty against Mountain Air Cargo of Denver, N.C., for operating an ATR-42 airplane when it was not in compliance with Federal Aviation Regulations.
The FAA alleges Mountain Air Cargo mechanics improperly repaired a dent in a cargo door at the rear of the aircraft in August 2012.



The agency alleges the company failed to follow its FAA-approved aircraft maintenance program, which required it to report the damage to the aircraft manufacturer along with a repair plan, and obtain the manufacturer's approval for the repairs. The dent exceeded the allowable limits for the kind of repair that was done, the FAA alleges.

Mountain Air Cargo operated the ATR-42 aircraft on 115 flights between August 7 and October 29, 2012 when it was not in an airworthy condition due to the improper repair, the FAA alleges.

Mountain Air Cargo is scheduled to meet with the FAA in mid-September to discuss the case.

NTSB to consider safety study on drug use in aviation

The National Transportation Safety Board has announced it will consider findings of a safety study on drug use in aviation when it releases the UPS Flight 1354 crash report next month.

However, NTSB spokesman Eric Weiss said the two matters are not related.

UPS 1354, an Airbus A300-600, crashed short of the runway on approach to Birmingham-Shuttlesworth International Airport about 4:45 a.m., Aug. 14, 2013.

Both pilots were killed in the crash.On Sept. 9, the NTSB is scheduled to release its report on the crash's probable cause with findings from its more than 12-month investigation.

Also that morning, the board will convene a meeting to discuss the safety study. The two matters are scheduled on the same day but are not connected, Weiss said.

"The NTSB study will examine trends in over-the-counter, prescription and illicit drug use documented from toxicology reports of pilots that died in plane crashes in the United States from 1990 to 2012," according to an NTSB statement.

http://www.ntsb.gov/news/2014/140828.html

Flying Under the Influence of Fatigue

By Bob Baron, Ph.D
President,
The Aviation Consulting Group

The other day, while inflight, a Gulfstream GIV pilot was pulled over for suspicion of flying under the influence of fatigue. Yep, the airborne fatigue police were out in full force that day. And, just as suspected, the pilot did indeed have a 0.14 blood fatigue level (above the legal limit of 0.10) when measured by the accurate and very reliable "Fatigueomometer." WHAT THE ****?????????

Ok, now that I've got your attention, let's get serious. Pilot fatigue has, and continues to be, a very real threat to aviation safety. Recently, the U.S. Federal Aviation Administration (FAA) overhauled its prescriptive flight, duty and rest regulations for Part 121 carriers as a partial offset to the pervasive fatigue problem. This is a step in the right direction, as the original regulation was enacted over half a century ago when transportation fatigue research was still in its infancy. What I am still having a hard time, though, is why the new regulation has excluded freight and cargo operators, some of which need the regulation even more so than their passenger flying counterparts. In my opinion, this was a serious oversight, and I believe that the crash of UPS Flight 1354 elucidated the significance of the problem. See the official U.S. National Transportation Safety Board (NTSB) accident report here http://tinyurl.com/p7lg8ja.

Most problematic, however, is the Part 91 (primarily business aviation) realm. Part 91 operators do not have prescriptive flight, duty and rest regulations like their Part 121 counterparts. Thus, Part 91 operators have the option of "flying their pilots to sleep" or taking a safer, proactive approach by devising their own flight, duty and rest guidelines.

The latter is obviously a prudent choice and guidance targeted specifically for Part 91 operators can be found at http://flightsafety.org/current-safety-initiatives/duty-rest-guidelines. This link will take you to the recently revised National Business Aviation Association (NBAA) Duty/Rest Guidelines for Business Aviation document.

In addition to the NBAA recommended guidelines, Part 91 operators should also consider implementing a Fatigue Risk Management System (FRMS). An FRMS offers the most robust management of safety risks related to fatigue, and it is part of the company's existing (or soon to be existing) Safety Management System (SMS). A formal FRMS addresses fatigue holistically and thus will not only provide flight, duty and rest guidelines but also fatigue education and awareness as well as a non-punitive fatigue reporting scheme, among other things. FRMS also emphasizes that fatigue mitigation is a shared responsibility between the organization and the pilots. The best organizational policies will fall short if pilots' personal lifestyles are in conflict with organizational fatigue policies and philosophies; conversely, the best personal lifestyles will not help to resolve the problems of an organization that pushes pilots beyond their useful limits on each and every trip. Eventually something will have to give. And you know what might happen then…

See the official U.S. National Transportation Safety Board (NTSB) accident report here http://tinyurl.com/p7lg8ja.

http://flightsafety.org/current-safety-initiatives/duty-rest-guidelines

Dear colleagues,

We have just scheduled a bunch of Human Factors and Train-The-Trainer courses for the week of January 19th, 2015 in Myrtle Beach, SC, USA.

January 2015

Course: Human Factors (HF) Train-The-Trainer For Aircraft Maintenance 5-Day Course

Date: January 19-23, 2015

Location: Myrtle Beach, SC, USA

Course: Human Factors (HF) Initial For Aircraft Maintenance 2-Day Course

Date: January 19-20, 2015

Location: Myrtle Beach, SC, USA

Course: Human Factors (HF) Recurrent For Aircraft Maintenance 1-Day Course

Date: January 19, 2015

Location: Myrtle Beach, SC, USA

Course: Train-The-Trainer (generic) 3-Day Course

Date: January 21-23, 2015

Location: Myrtle Beach, SC, USA

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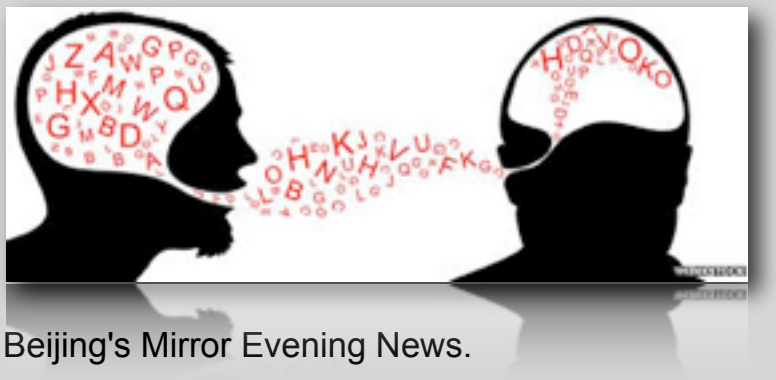
Malaysian Crew Members 'Afraid To Fly'

Malaysian Airlines has been losing cabin crew at a higher than normal rate recently and the leader of its biggest union says there's no mystery there. Abu Malek Ariff told AFP some employees "are now afraid to fly." Since the missile attack on one of its aircraft in Ukraine, which followed the March disappearance of another Boeing 777, it's believed that family pressure has also convinced some of the flying staff to find other work.

At total of 186 people quit following the Ukraine incident. More than 500 people, including 27 crew, are either dead or missing without a trace in the two incidents. "Following the MH17 incident, there was a spike in crew resignations but the number has now decreased to and routinely expected levels," the airline said in a statement. "Many cited 'family pressure' as the reason for their resignation due to the MH17 and MH370 tragedies." Meanwhile, Thai Airways is denying reports that it's facing an exodus from its cockpits over the airline's troubled financial situation.

A local report said 200 pilots quit suddenly because they're worried about the deficit the state-controlled carrier is running and the debts it's running up. The airline told a news conference Monday that 30 pilots have quit but it hasn't affected operations. Thai Airways announced earlier this year that it is restructuring after more than a year of heavy losses and will lose about 25 percent of its workforce by 2018. The airline now has 24,000 employees operating a mostly aging mixed fleet of Boeing and Airbus aircraft and faces stiff competition from carriers springing up in neighboring countries. Restructuring of the airline was ordered by the ruling military junta, which has given orders to a so-called "super committee" to restore the airline to world-class status over the next five years.

Pilots in China required to pass Mandarin test from 2016



Pilots in China will now have to pass a "level four" test for Mandarin Chinese, the country's official language, under new regulations recently announced by the Civil Aviation Administration of China (CCAC), according to Beijing's Mirror Evening News.

The requirement will take effect from January 2016, meaning that pilots who speak with an accent that "often impedes" comprehension will be disqualified if they fail to pass the test, the report stated.The new rules are expected to affect all pilots, who must renew their license every six years.

Under the new regulations, the period of licenses for pilots will be cut from an indefinite time period to six years. An extension of six years is allowed if a license's period of validity has already expired and a renewal has been granted.

Experts attributed the higher language threshold for pilots to the fact that many aircraft crashes may have been caused by miscommunications.

Given that more than 80 languages and dialects are used in China and even native Mandarin speakers can have trouble communicating with each other, misunderstandings between pilots and control towers can affect taking off and landing.

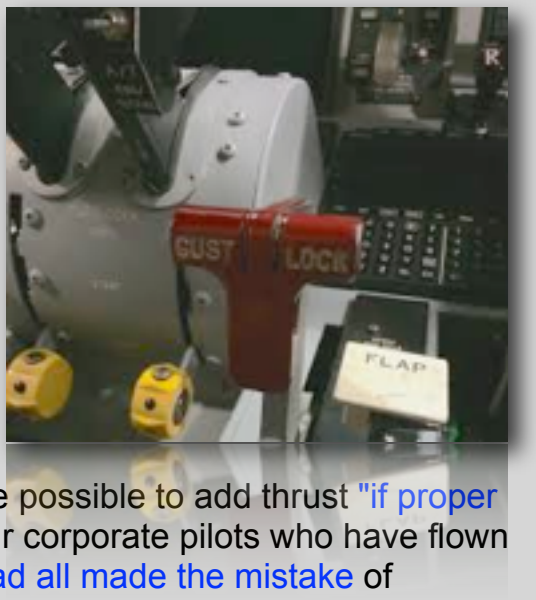
To ensure aviation safety, a more stringent requirement for pilots' Mandarin proficiency is needed, said Zhang Qihuai, a civil aviation law expert.

Strong regional accents have long been a handicap between pilots and control tower workers and the issue must be addressed for the sake of aviation safety, according to Du Yang, a senior instructor at Jing Gong (Beijing) Co's General Aviation Flight Standards Office.

Aviation communication in China can also be affected by factors other than the country's various accents and dialects. In early July, a China Eastern aircraft's arrival at Wuhan, capital of central Hubei province,

was delayed after an apparent radio blackout with air traffic control that lasted 12 minutes. The two air controllers on duty had fallen asleep, according to a previous foreign media report.

Gulfstream Warns About Control Locks



Gulfstream jet owners received notice from the company that a safety device designed to prevent accidents like the one that killed sports-franchise mogul Lewis Katz can be foiled in some circumstances. The letter helps explain why Katz's Gulfstream IV reached a speed of 190 miles an hour on the ground without lifting off as it tried to depart Bedford, Massachusetts, on May 31. The system is supposed to keep pilots from setting engines for takeoff power if the flight controls are locked, Gulfstream told operators in an Aug. 18 letter. Instead, it may be possible to add thrust "if proper unlock procedures are not followed," it said.Four corporate pilots who have flown the Gulfstream IV said in interviews that they had all made the mistake of forgetting to switch off the gust lock before starting the engines. When flight controls are held in position by the gust-lock mechanism, liftoff is prevented even after the plane accelerates. In the Katz crash, there was no evidence the cockpit crew attempted to check whether the control surfaces were working after starting the engines and taxiing to the runway, according to the U.S. National Transportation Safety Board's review of the flight data recorder. The Gulfstream notice reminded pilots to ensure they have switched off the gust lock before starting the engines and to always check the flight controls before takeoff. The notice didn't specifically reference the Katz crash.

The four pilots interviewed said that once the engines start driving the plane's hydraulic system, which in turn moves the plane's flight controls, it becomes difficult to release the gust lock. It's still possible to force the locking mechanism's switch into the off position, they said. If the gust-lock lever is in the on position, it limits engine power to slightly above idle, according to the plane's manual. None of the pilots said they knew it was possible to move the switch in a way that allowed takeoff power while the gust lock was still engaged. Gulfstream's manuals don't mention this scenario.

In the Katz crash, the plane's elevator, which raises and lowers the nose, was in a position "consistent" with being locked during the takeoff attempt, according to a preliminary report released June 13 by the NTSB. The gust-lock lever was found in the off position in the wreckage, the NTSB said.

http://www.bloomberg.com/news/2014-08-20/gulfstream-warns-pilots-about-jet-design-after-katz-crash.html

Air Transport FEEDBACK from the UK

CHIRP publishes 4 quarterly FEEDBACK newsletters (General Aviation, Air Transport, Cabin Crew and Maritime) containing a selection of reports (given the reporters consent) combined with CHIRPs response, to make a wider audience aware of situations.

ENGINEERING REPORTS
BASE MAINTENANCE

Report Text:

It came to light that there was a possibility of a lucrative overseas contract and the Accountable Manager was organizing this in conjunction with the commercial team. The deployment was initially scheduled for approximately 7 days' time.

The aircraft was currently on task but the time would still be sufficient to perform any required maintenance prior to deployment. Following intense pressure from the customer and the commercial team the deployment was moved forward.

The decision was taken to perform the required maintenance during the deployment. I was unhappy about this but the inspection was not due immediately and I hoped the aircraft would be back by the time the inspection was due or that alternatively an extension could be applied.

During the deployment a work package was produced and I was advised it needed to be stamped prior to the aircraft's return to base. The deployment was very lucrative with potentially high losses and as the certifying engineer I was made aware of these issues. Following an argument with my colleague (also a certifying engineer) we begrudgingly stamped off the work package as completed. As the engineers on station it was difficult to contact anyone in authority at the company and we felt isolated and under a lot of pressure due to how high profile the contract was.

Notes:

The check was signed as completed and backdated to the departure date from base. The aircraft returned within the check period (1 Hour remaining to the check) and was subsequently grounded by the CAA. An internal investigation has been completed by the organization in question
.

CHIRP Comment
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With proper pre deployment risk assessment, management control and planning this issue could and should have been avoided. The organization has taken steps and improved controls to ensure this incident will not be repeated. For the individuals involved they feel strongly that others could learn from their experiences.

When making certification statements individuals should always ensure the work has been completed, that the CRS statements reflect accurately the work that has been carried out and that dates/times used time are correct. This must apply irrespective of commercial or operational pressures.

Smart skins for aircraft that can detect injury

BAE Systems is developing human-like 'skin' for aircraft capable of detecting injury or damage and the ability to 'feel' the environment around them.

Engineers at its Advanced Technology Centre are investigating the concept that could be embedded with tens of thousands of micro-sensors, or 'motes'.

When applied to an aircraft, these sensors will enable it to sense wind speed, temperature, physical strain and movement, far more accurately than current technology allows.As small as grains of rice or even dust particles, collectively these motes would have their own power source and when paired with the appropriate software, be able to communicate in much the same way that human skin sends signals to the brain.

The 'smart skin' concept will enable aircraft to continually monitor their health, reporting back on potential problems before they become significant.

This would reduce the need for regular check-ups on the ground and improve the efficiency of aircraft maintenance, the availability of planes and help to raise safety.

The sensors are so small that BAE is exploring the possibility of retrofitting them to existing aircraft and even spraying them on like paint.

Foamy mess: Black Hawk helicopters buried at National Guard hangar

Say what you want about the fire-suppression system at the Oklahoma National Guard aviation facility in Tulsa — it definitely works quickly.

Contractors and soldiers there were caught by surprise on Tuesday when a with the fire security company SimplexGrinnell accidentally deployed a three-month-old fire suppression system in a hangar holding UH-60 Black Hawk military helicopters, said Army Col. Max Moss. Within seconds, the hangar was overwhelmed with foam, and it spilled out onto a nearby flight line afterward.

Photographs and video of the scene shows numerous Black Hawks buried in the white, fluffy foam — both in and out of the hangar. Each helicopter is 65 feet long and about 10 feet tall at its highest point, the tail rotor.

Moss said Tuesday that the hangar had at least six Black Hawks in it when the fire suppression system deployed, and others outside also were affected by the foam. The aircraft weren't damaged, and six of the 10 affected have been cleared to fly again.

"We were surprised by the accidental activation of the system, but I think it was educational to those working on those aircraft every day to see how effectively that foam deploys," Moss said.

Video of the hangar published by KOTV News 6 shows it rapidly filling. It took the contractor about three hours to clean up the mess, Moss said.

http://www.newson6.com/story/26372082/tulsas-army-national-guard-base-covered-in-fire-suppression-foam

Scientists agree: Coffee naps are better than coffee or naps alone

People who took a coffee nap committed fewer errors in a driving simulator

If you're feeling sleepy and want to wake yourself up — and have 20 minutes or so to spare before you need to be fully alert — there's something you should try. It's more effective than drinking a cup of coffee or taking a quick nap.

It's drinking a cup of coffee and then taking a quick nap. This is called a coffee nap.

It might sound crazy: conventional wisdom is that caffeine interferes with sleep. But if you caffeinate immediately before napping and sleep for 20 minutes or less, you can exploit a quirk in the way both sleep and caffeine affect your brain to maximize alertness. Here's the science behind the idea.

How a coffee nap works

To understand a coffee nap, you have to understand how caffeine affects you. After it's absorbed through your small intestine and passes into your bloodstream, it crosses into your brain. There, it fits into receptors that are normally filled by a similarly-shaped molecule, called adenosine.

Adenosine is a byproduct of brain activity, and when it accumulates at high enough levels, it plugs into these receptors and makes you feel tired. But with the caffeine blocking the receptors, it's unable to do so. As Stephen R. Braun writes in Buzz: the Science and Lore of Alcohol and Caffeine, it's like "putting a block of wood under one of the brain's primary brake pedals."

Now, caffeine doesn't block every single adenosine receptor — it competes with adenosine for these spots, filling some, but not others.

But here's the trick of the coffee nap: sleeping naturally clears adenosine from the brain. If you nap for longer than 15 or 20 minutes, your brain is more likely to enter deeper stages of sleep that take some time to recover from. But shorter naps generally don't lead to this so-called "sleep inertia" — and it takes around 20 minutes for the caffeine to get through your gastrointestinal tract and bloodstream anyway.So if you nap for those 20 minutes, you'll reduce your levels of adenosine just in time for the caffeine to kick in. The caffeine will have less adenosine to compete with, and will thereby be even more effective in making you alert.

Experiments show coffee naps are better than coffee or naps

Scientists haven't directly observed this going on in the brain after a coffee nap — it's all based on their knowledge of how caffeine, adenosine, and sleep each affect the brain independently.

But they have directly observed the effects of coffee naps, and experiments have shown they're more effective than coffee or naps alone in maximizing alertness.

In a few different studies, researchers at Loughborough University in the UK found that when tired participants took a 15-minute coffee nap, they went on to commit fewer errors in a driving simulator than when they were given only coffee, or only took a nap (or were given a decaf placebo). This was true even if they had trouble falling asleep, and just laid in bed half-asleep during the 15 minutes.

Meanwhile, a Japanese study found that people who took a caffeine nap before taking a series of memory tests performed significantly better on them compared to people who solely took a nap, or took a nap then washed their faces or had a bright light shone in their eyes. They also subjectively rated themselves as less tired.

Interestingly, there's even some evidence that caffeine naps can help people go for relatively long periods without proper sleep. As part of one study 24 young men went without proper sleep for a 24-hour period, taking only short naps. 12 of them, who were given just a placebo, performed markedly worse on a series of cognition tests, compared to their baseline scores. 12 others, who had caffeine before their naps, managed scores roughly the same as their baselines for the entire day.

How to take a coffee nap

Taking a coffee nap is pretty straightforward. First, drink coffee. Theoretically, you could drink another caffeinated beverage, but tea and soda have generally have much less caffeine than coffee, and energy drinks are disgusting. Here's a good database of the amount of caffeine in many types of drinks.

You need to drink it quickly, to give yourself a decently long window of time to sleep as it's going through your gastrointestinal tract and entering your bloodstream. If it's tough for you to drink a lot of hot coffee quickly, good options might be iced coffee or espresso.

Right after you're finished, immediately try to go to sleep. Don't worry if it doesn't come easily — just reaching a tranquil half-asleep stage can be helpful.

Finally, make sure to wake up within 20 minutes, so you don't enter the deeper stages of sleep, and you're awake when the caffeine is just starting to hit your brain.

Voila: the perfect coffee nap.

http://www.ncbi.nlm.nih.gov/pubmed/9401427

http://www.sciencedirect.com/science/article/pii/S1388245703002554

http://www.ncbi.nlm.nih.gov/pubmed/8026448

http://www.caffeineinformer.com/the-caffeine-database

Book - They Always Come In Three

Department of Homeland Security Agent Michael Speed, with peculiar personality quirks and his partner Dave Cyrano are assigned to investigate a succession of unexplained airplane crashes.Their pursuit takes them in several different directions. From Whidbey Naval Air Station to an arrogant Aryan nation's militant group to an obscure aviation company in Sweetwater, Texas, and then finally, to the top tier of the nation's aviation investigation organizations in Washington, D.C.

They find two common threads in their search, Avanti Aerospace and the European Alliance Consortium. However, each time they are close to uncovering the conspiracy, they are abruptly assigned to another project.

As the body count, from the airline disasters continues to pile up, Speed and Cyrano enlist the aid of Jason Brady, a teenage survivor of one of the air crashes with inside knowledge of the flight deck. Together they embark on a course that puts their lives in danger. When the smoke clears only one of investigators will be left standing

A Check-in Error Caused Takeoff Problems for Qantas Flight

Airline employees incorrectly registered 87 children as adult passengers, creating an imbalance in the aircraft's weight distribution

A Perth-bound Qantas flight from Canberra had a close call earlier this year, with the pilot having to make a risky last-minute adjustment to get the aircraft off the ground.

A report released Wednesday by the Australian Transport Safety Bureau (ATSB) said that a problem was caused because a group of school children on the Boeing 737 had been checked in as adults and assigned the standard adult weight of 87 kg.

The children — comprising more than half of the flight's 150 passengers — were all seated in the back of the aircraft, resulting in it becoming nose-heavy. This meant that the captain had to apply a significant amount of back pressure at takeoff, running the risk of the aircraft's tail hitting the runway. The report states that he was also forced to exceed the calculated takeoff safety speed.

The rest of the flight went off without a hitch, but it was a tense few moments for the pilots. The ATSB later found that the final load sheet overstated the aircraft weight by 3.5 to 5 tons.

Qantas told the ATSB that it has issued a notification to check-in staff, reminding them to ensure that children are registered as children in the airline's systems.

http://www.atsb.gov.au/media/5092920/ao-2014-088_final.pdf

Ted Talk - Ideas Worth Spreading

Simon Sinek has a simple but powerful model for inspirational leadership all starting with a golden circle and the question "Why?" His examples include Apple, Martin Luther King, and the Wright brothers — and as a counterpoint Tivo, which (until a recent court victory that tripled its stock price) appeared to be struggling.

http://www.ted.com/talks/simon_sinek_how_great_leaders_inspire_action.html