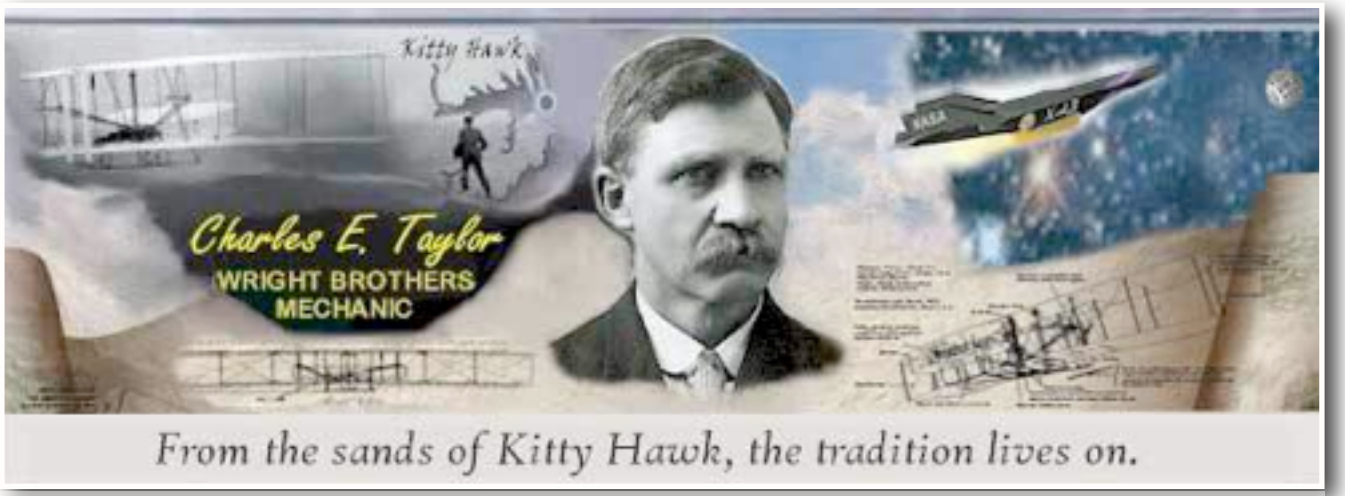
Aviation Human Factors Industry News

Volume IX. Issue 01, January 04, 2013



Hello all,

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In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

Crashed Superjet was coded as fighter: investigators

Indonesian air traffic control was unaware that the crashed Sukhoi Superjet 100 was an airliner because it had been coded as a Sukhoi Su-30 fighter.

Flight-data personnel at Jakarta, having received a flight plan for the Superjet's demonstration, coded the aircraft as an Su-30 because the database being used did not include the twinjet. Investigators probing the fatal Superjet crash on 9 May indicate that this misleading entry influenced a crucial decision to permit the airliner to descend to low altitude in a mountainous region, shortly before it struck terrain.

The inquiry also reveals that the aircraft was inadvertently set on its fatal collision course by the pilots who, distracted, failed to keep the aircraft turning during an orbit.

When Jakarta approach accepted responsibility for the Superjet during its flight, the controller checked the aircraft type through his radar display.

Owing to the coding, the data indicated that the aircraft was an Su-30. The controller believed the aircraft was a military fighter flying to the Bogor region for a test flight. Bogor is the location of the Atang Sanjaya military training area.

As the aircraft headed south from Jakarta the Superjet pilot requested a descent to 6,000ft and an orbit.

Indonesia's National Transportation Safety Committee says this request was based on the pilot's preparation for a runway 06 approach when the aircraft returned to Jakarta Halim airport. This approach differed from an earlier demonstration flight that day, which had used the opposite-direction runway 24.

Cockpit-voice recordings show that the captain explained to another individual on board that the descent and orbit were intended to bleed altitude in order to avoid being too high for the 06 approach.

The NTSC says the Jakarta approach controller was "not concerned" about the boundaries of the training area, which had an upper airspace limit of 6,000ft.

"The [controller] assumed that a military aircraft was eligible to fly in this area," it adds. "As a result [he] approved the aircraft to descend to 6,000ft."

While the earlier demonstration flight had turned left, northeast of Mount Salak, and headed back to Jakarta, the second flight instead performed a right-hand orbit which took its flightpath directly north of the peak.

Ironically, as the aircraft turned, the captain demonstrated the terrain-awareness function to a customer representative in the cockpit. Because the aircraft, at this point, was pointing northeast the terrain ahead was relatively flat, and the captain said there was "no problem with terrain at this moment".

To perform the orbit the pilot sequentially adjusted the heading selector - setting it to 333°, then 033°, 103°, 150° and 174°. Investigators believe the crew became distracted by discussions about fuel consumption with the customer representative, and did not notice when the Superjet dutifully rolled out onto its selected heading, 174°, which took it south towards Mount Salak.

By the time the pilots adjusted the heading selector again, to 325°, nearly a minute had gone by since the aircraft exited its orbit. The new heading turned the aircraft into the mountain peak, generating terrain-avoidance warnings which the pilots disregarded as being false.

None of the 45 occupants survived the impact. The NTSC says Jakarta approach had been busy handling several other flights and did not notice that radar contact had been lost with the Superjet for more than 20min. Only after the controller contacted Halim tower, the NTSC adds, did he realized the missing aircraft was a civil airliner.

Lack of training cited in fuel mix-up that brought down helicopter

The Transportation Safety Board of Canada (TSB) has determined that a case of bad gas brought down a helicopter in Quebec last year.

The board has released its findings into a helicopter incident in March of 2011 that sent two passengers to hospital, finding three helicopters, including the one that crashed, were refueled with Jet A-1 fuel instead of the required AVGAS 100LL.

The three Robinson R44 II helicopters had been traveling from Port-Menier, Que. to Quebec City when they stopped for fuel in an unplanned detour, due to weather, in Forestville, Que. The employee at the aerodrome where they landed, working alone, had only worked at the fuel station for about four months and had never refueled a helicopter with AVGAS, the TSB investigation noted, and their training also did not mention some helicopters use AVGAS.

During the doomed helicopter's initial climb, it lost engine power at about 1,000 feet, forcing the pilot to land in a residential neighborhood, the investigation report said, substantially damaging the helicopter and injuring the two occupants. The other two birds were able to land nearby safely.

"It would be like putting diesel fuel in your car," explained Yanick Farazin, the lead investigator on the incident and a senior investigator at the TSB in Ottawa. Jet A-1 fuel is similar to a refined diesel and is used to fuel turbine engines, whereas AVGAS is for piston engines similar to unleaded fuel.

"Usually we'll see two categories of gasoline," Farazin said, but "in those two different categories there are many types."

Farazin said the helicopter that crashed was the last aircraft to take off after refueling, and it ran on the ground for longer than the other two, who took off quickly after refueling.

"We suspect that because of the way it was fueled, the Jet A-1 fuel entered the system quicker than the others. As soon as they discovered this loud bang and realized the wrong fuel was added, the other two aircraft landed as soon as possible … They didn't take any chances," he said. "If they would have stayed airborne and said 'wow, I wonder what's going on with the third aircraft' they would have had issues."

No standards set by regulator in refueled training

The craft's operating handbook recommends pilots take fuel samples after refueling, as fuel can be distinguished by color — AVGAS is blue while Jet A-1 is a light yellow. But the investigation report noted that pilots do not typically take samples after refueling because it does not allow time for any contaminants to settle. The pilots were also in a rush to get back to Quebec City before nightfall, as they were not certified to fly at night.

"If they stopped and fueled right away, they would have had to delay their departure, let's say 30 minutes, then verify the fuel. For them that was not an option, the night was coming and they had to get to Quebec City, so there was a little bit of pressure they put themselves into at that point," Farazin said.

While Transport Canada does not set standards for refueled training programs or qualifications, the investigation report noted that the employee would have "greatly benefitted from a more detailed training program" and having aircraft reference material on-hand would have helped bolster the defenses against accidents like what occurred.

Other contributing factors, the TSB noted, were that the pilots did not supervise the employee during refueling and the Jet A-1 fuel nozzle had been modified to be smaller than normal so it would be able to refuel more helicopters, but also into the smaller AVGAS tanks.

Sullenberger: 'We Need Experienced Pilots'

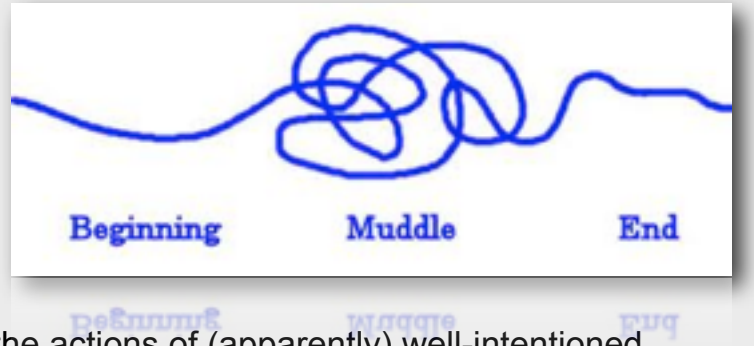
'Safety Standards Should Not Be Lowered To Accommodate The Airlines'

Captain Chelsey "Sully" Sullenberger has gone on the record as saying that new rules requiring pilots to have 1,500 hours in their logbooks before becoming an airline pilot are on the mark, and should not be changed because of a supposed looming pilot shortage.Responding to an article which appeared in the Wall Street Journal, Sullenberger wrote in a letter to the editor that if he and first officer Jeff Skiles had been less experienced when their A320 ingested birds into both engines leading to the "Miracle on the Hudson," the outcome might have been much different.

Sullenberger wrote that the new mandates, which were passed by both chambers of the U.S. legislature in a single day, stemmed from decades of accidents which resulted in needless fatalities. He said the specter of a regional airline pilot shortage is a "myth" perpetuated by the airlines to allow them to offer lower pay. He wrote that newly-hired relatively low-time pilots flying as first officers in regional jets are getting on-the-job training with people sitting in the back of the airplane.

Sully says that instead of lowering the standards for pilots, the airlines should offer wages and working conditions that will attract well-qualified pilots.

Sorting Through the U.S. SMS Muddle



Safety Management System (SMS): Three words — and an acronym — that are striking dread in the hearts of MROs serving the U.S. market.

To understand where the dread about SMS comes from, you have to plunge into the murky, muddled world of U.S. aviation rule-making, the actions of (apparently) well-intentioned bureaucracies and the realities of MROs trying to stay afloat in an increasingly competitive, recession-racked economy.

SMS Explained

The idea of SMS is for a company to develop its own consistent, properly documented and end-to-end safety program. This system is a form of enterprise-level quality assurance. One that is intended to identify and catch errors that can compromise safety and avoid them in future, as well as being a system that provides a clear, consistent and safe approach to doing business.

For government, there's an added benefit. SMS allows an agency to download its inspection services to the companies being inspected. Rather than having to inspect an MRO's shop personally to see if the MRO is following procedures, the agency simply reviews the MRO SMS' documentation of compliance. The agency then conducts spot checks on various aspects of the company's actual operations, to ensure that what the SMS is saying matches reality.

In theory, I love the idea of an MRO SMS," said Leon Dodd, corporate director of quality and flight safety for StandardAero. "It helps us deal with the human factor of maintenance that can lead to errors. There is a tendency, when you are working on the same type of part 50 times a day on a repetitive basis, to forget that it is going on an aircraft that flies at 30,000' — and depends on that part to stay up there safely."

The Push for SMS in America

The FAA has been interested in SMS since the January 8, 2003 crash of US Airways Express Flight 5481, in which all 23 occupants of a Beechcraft D1900 died in Charlotte, North Carolina.

"The National Transportation Safety Board determines that the probable cause of this accident was the airplane's loss of pitch control during takeoff," said the NTSB accident investigation report. "The loss of pitch control resulted from the incorrect rigging of the elevator control system compounded by the airplane's aft center of gravity, which was substantially aft of the certified aft limit."

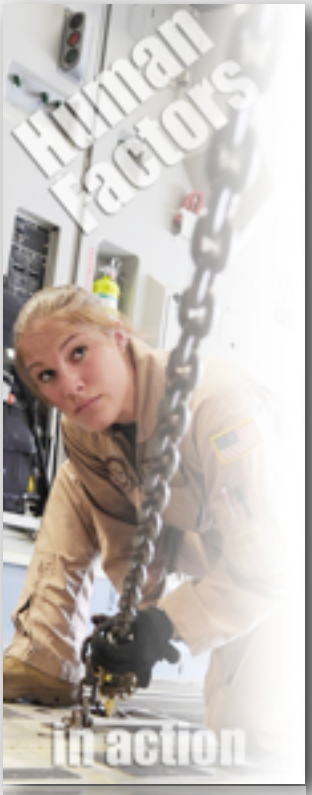
According to the NTSB, "The…inspector did not provide adequate on-the-job training and supervision to the Structural Modifications and Repair Technicians mechanic who examined and incorrectly adjusted the elevator control system on the accident airplane…the quality assurance inspector and the Structural Modifications and Repair Technicians mechanic did not diligently follow the elevator control system rigging procedure as written, they missed a critical step that would have likely detected the miss-rig and thus prevented the accident."

READ THE FULL ARTICLE >>>

Human Factors In Action

Air Force Safety Center

For decades, the aviation medicine community has recognized that human factors threats are closely associated with mishaps. In fact, from 2001 through 2011, the Air Force average for human factors attributed Class A aviation mishaps was 73 percent. Military human factors professionals have discussed, taught, trained and briefed the deadly effects of channelized attention and other human factor threats. Most aviation professionals can define or identify a mishap where human factors were present; however, is there anything we can do to mitigate these human performance threats?
Proactive safety programs along with human factors analysis bridges the gap between two separate, yet related, fields in aviation safety. Proactive safety helps "close the loop" on existing human factors issues that may be present.



As the name implies, proactive safety enables investigators to identify operational threats and trends before a mishap occurs. Military Flight Operations Quality Assurance (MFOQA) is one such way errors or dangerous flight parameters can be recognized before a mishap. Historically, aviation human factors experts collect and analyze data from mishaps that have already occurred and then forecast ways to predict and prevent future mishaps. MFOQA allows the investigator to analyze and predict a mishap without a mishap occurring!

Without a doubt, the best applied training for aviators is from aviators. Timely and applicable education is an effective way to reduce human factors mishaps. The self-reporting tool, Air Force Aviation Safety Action Program (ASAP) allows aircrew to discuss "there I was stories" in a non-punitive venue without filing a High Accident Potential (HAP) report. The more we can learn from our "near-misses", the more likely we will prevent future mishaps from occurring. This is proactive safety in action!

The Line Operations Safety Audit (LOSA) program provides an over-the-shoulder, peer observation to assess safety margins and improvement measures. Aviators have undergone many hours of Crew Resource Management (CRM) and LOSA can measure the effectiveness and utility of this program. Successful communication and crew dynamics can set the stage for success. A LOSA observer can provide a crew with feedback on how well they utilized CRM.

MFOQA, ASAP and LOSA can be effective programs to provide tangible, often real-time, feedback on crew flight performance. Non-punitive, proactive safety programs educate crews BEFORE a mishap occurs. Again, most aviation professionals can define or identify a mishap where human factors were present; however, we must lean forward and prevent aviation threats. Clearly, through proactive safety, we can collectively reduce mishaps.

Chief, Investigations Branch
Human Factors Division
Headquarters Air Force Safety Center

http://www.afsec.af.mil/proactiveaviationsafety/index.asp

CALLBACK

From NASA's Aviation Safety Reporting System

ASRS

During takeoff and some taxi maneuvers, the high thrust levels of modern jet engines can produce exhaust wakes that present a significant hazard to other aircraft operating on or near the airport surface. The jet blast incidents presented in this CALLBACK highlight the need for both Pilots and Air Traffic Controllers to be aware of the circumstances where this hazard can occur and take measures to avoid jet blast or prevent it from happening.

The event below deals with aircraft versus aircraft scenarios that occurred in the runway environment. Jet blast (or prop wash) can also occur in the ramp area where it poses a risk to vehicles and ground personnel as well.

The First Officer of a DHC8 reported being "knocked off the centerline" during landing after encountering the jet blast of a commuter jet.

- The Captain was Pilot Flying and landing on Runway 35…. We were cleared to land and just crossing the threshold when Tower cleared a commuter jet for takeoff from Runway 8…. Right after we touched down, we saw grass and dust being blown across our runway from the full-power jet blast of the commuter jet. During our landing roll-out, we went through the jet blast and were knocked quite forcefully off the centerline of the runway. The Captain did a great job of maintaining control of the aircraft and keeping it on the runway. This event could have ended much worse, with our aircraft possibly running off the runway. The takeoff clearance was heard and noted by both the Captain and myself. We both saw debris blowing across the runway, but by that point we could only continue the landing.

The event occurred because the proximity of Runway 8 to Runway 35 is close enough to cause jet blast disruptions for aircraft landing on Runway 35. The Captain maintained control of the aircraft even when it was drifting off centerline. I told the Tower that we had been hit by the jet blast, but I never got a response. I believe this could have been avoided if the Tower had waited five seconds for us to clear the blast zone of Runway 8. The Tower should not clear takeoffs from Runway 8 when aircraft are landing Runway 35, until the landing aircraft has cleared past Runway 8. I am disappointed that this procedure is even considered. If it had been a smaller aircraft, I believe it would have been blown off the runway.

Have you seen the new FAA Safety Briefing?

Notice Number: NOTC4474

Have you checked out the latest issue of FAA Safety Briefing? In addition to several internationally-themed feature stories, the issue's departments also offer a wealth of helpful general aviation news and information.

In line with the issue's focus on global topics, the Checklist department (p 27) explores the International Flight Information Manual - an important reference tool for those considering a flight beyond our borders; Jumpseat (p1) covers the importance of embracing Safety Management Systems (SMS) as "a means to think globally and act locally"; and FAA Faces (p 33) profiles Christopher Barks, manager of the FAA Office of International Affairs Western Hemisphere team. Of interest to aircraft mechanics is this issue's Nuts, Bolts, and Electrons department (p 28) which stresses the importance of purchasing and using certified parts.

To access the issue online, go to: http://www.faa.gov/news/safety_briefing/. Don't forget to follow us on Twitter as well at @FAASafetyBrief.

Online Survey on Air Transport Pilot Attitudes about Upset Recovery Training

Airline and Air Transport Cargo Pilots:
Please give us your opinion!

The Target Audience Is Pilots Currently Employed by an Air Transport Company (Airline or Cargo) or Pilots Retired from Such Duty No More than Five Years.
The survey supports research on Air Transport Upset Prevention and Recovery Training being conducted by a faculty member in the Department of Aeronautical Science at Embry-Riddle Aeronautical University, Daytona Beach, Florida.

It takes 7-8 minutes to complete. Participants are anonymous and cannot be identified by their employers or by the researchers or anyone else. Thanks in advance for your participation in our research.

http://www.surveymonkey.com/s/UpsetTrainingSurvey

Happy New Year Year and Thank You For ALL You Do For Aviation Safety!