Aviation Human Factors Industry News

Volume V. Issue 19, July 17, 2009

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

Human factors emerge as trend in air crashes: expert

Human factors are emerging as a worrisome trend in global air crashes other incidents as fatigue, complex flight systems, inconsistent and regulation pose new challenges to airlines, a leading safety advocate said on Tuesday.

Bill Voss, president of the U.S.-based Flight Safety Foundation, a watchdog and advocacy group, told industry and government officials that 2009 could be the worst year in a decade for major commercial aviation accidents.

There have been 12 crashes this year through June and carriers globally are on pace to equal the 10-year high of 24 crashes in 1999, according to safety foundation figures.

There were 16 crashes last year.

This year's total would include a Yemeni airliner with 153 people that plunged into the Indian Ocean and the Air France crash in the Atlantic Ocean off Brazil on June 1 that killed 228 passengers and crew.

Both crashes involved Airbus jetliners and are under investigation.

"We've seen an increase in loss of control," Voss said of reported in-flight mishaps linked to turbulence or other unexpected situations that usually do not result in crashes. "We're back in the human factors business."

Crews losing control of aircraft accounted for 13 percent of accidents internationally, according to 2008 figures compiled by the International Air Transport Association.

"Systems don't always act the way you expect them to," Voss said.

The ill-fated Air France flight, an Airbus A330, apparently hit severe turbulence before experiencing a rapid succession of technical problems en route from Rio De Janeiro to Paris.

Voss said airlines and other aviation system operations are trying to quickly adapt to highly technical and automated aircraft and flight systems

with varying resources, some of them inadequate.

For instance, roughly half of 190 regulatory agencies reviewed by the International Civil Aviation Organization had insufficient numbers of inspectors for safety oversight, Voss said.

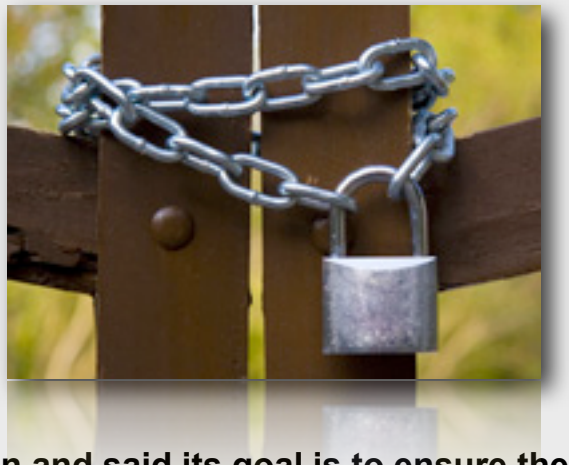
Latin America, Africa, Russia and the former Soviet Republics pose the most concern for all types of severe accidents, Voss said.

Rapid industry expansion in the middle of the decade put financial pressure on countries trying to develop more robust aviation systems, he said. Available capital to maintain new planes, training and oversight has been a serious question in some developing countries.

Tobias Aerospace Shut Down

FAA Investigates Allegations Mechanics Didn't Know English

A San Antonio aviation training facility has been shut down by the Federal Administration while it investigates allegations that the company certified thousands of mechanics who don't speak or read English, the international language for mechanics.



The investigation into Tobias Aerospace is affecting about 200 students, whose certifications have been held up because of the investigation.

"They tell me that both applications were denied," a student who didn't want to be identified said to KSAT 12 News.

FAA officials confirmed the investigation and said its goal is to ensure the safety of the flying public, including mechanics who can communicate in English.

"If a car breaks down, it's going to roll off on the side of the road. If an airplane breaks down, it crashes," the mechanic said of the importance of knowing English.

EU action could require US airlines to carry mechanics on board

Retaliation to the US Federal Aviation Administration reauthorization bill's provisions could force some US carriers to fly with their own FAA-certificated mechanics on board, an industry body has warned.

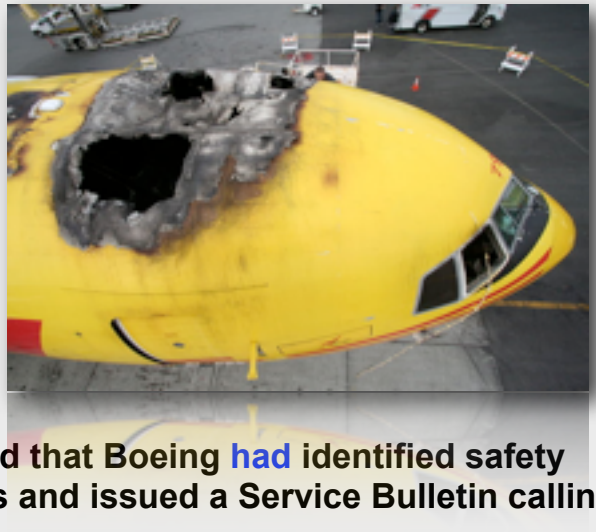
Francois Gayet, secretary general of the AeroSpace and Defense Industries Association of Europe (ASD), believes that the bill "stops" the aviation safety agreement between the European Union and the USA, eliminating the cost savings that derive from mutual recognition of certifications.

The ASD is arguing for the exclusion of territories that have bilateral agreements with the USA from the legislation's scope, and is making representations to the European Commission, EU member states and its own US counterpart, the Aerospace Industries Association.

Were the EU to respond to the reauthorization bill with equivalent regulations, some US carriers would have to carry mechanics aboard flights to destinations lacking an FAA-certificated repair station, says Gayet.

"The FAA can't cover all stations," he asserts, adding that the reauthorization bill represents "a serious, urgent problem", particularly for general aviation operators that serve a wide range of airfields and do not have space to carry mechanics on their aircraft.

Cargo Fire Findings



The NTSB last week determined a June 28, 2008, ground fire that damaged ABX Air Boeing 767 at San Francisco International Airport probably was due to the design of oxygen system hoses and lack of separation between electrical wiring and electrically conductive oxygen system components. The fire, which started aft of the cockpit before engine startup, extensively damaged the airplane. The NTSB noted that Boeing had identified safety issues involving the conductive hoses and issued a Service Bulletin calling for their replacement.

Air France 447 Investigation Interim Report

France Flight 447 shows a span of more than nine hours between the last message received from the flight's crew and the launch of a first rescue. Though communications on oversea flights can be sparse, the rescue launch order was still a full eight hours from the interval at which time the aircraft sent 24 messages showing onboard faults and system failures. When debris was found, it consisted mainly of light items from all areas of the plane. No evidence of fire or explosion has yet been discovered.

Distortions in the metal vertical reinforcements of specific debris "showed evidence of great compressive forces" with crumpled walls and ceilings that were deformed downward while the floor "was curved under the effect

of a strong upward pressure from below." This suggests, and investigators have publicly stated, that the aircraft hit hard in a rather level attitude. The translated report summarizes it less obviously stating, "Visual examination showed that the airplane was not destroyed in flight; it appears to have struck the surface of the sea in a straight line with high vertical acceleration." (There is some speculation as to the exact meaning of "in a straight line," which may have translated directly to "in the line of flight," but may have been intended to mean "in a level attitude," or simply that the aircraft had negligible yaw at impact.)

Weather at the time of the accident as depicted by infrared images seven minutes before and after the last ACARS message show "the general conditions and the position of Inter-tropical Convergence Zone over the Atlantic were normal for the month of June." However, investigators publicly announced that experienced teams working in simulators struggled to maintain control of the aircraft at cruise in turbulence with faulty air data. Messages sent automatically by the Airbus A330 accident aircraft show the aircraft was providing unreliable or conflicting air data to the pilots. The pilots were operating the aircraft at high altitude in turbulent conditions with forecast temperatures that were higher than normal (standard plus 13 degrees Celsius) making the thin air thinner and trimming controllability margins for the two co-pilots. Normal procedures suggest the captain may have been in the crew rest quarters at the onset of system failures. Without voice and data recorders, we may never know.

The BEA Interim Report (PDF)

http://www.avweb.com/pdf/f-cp090601e1.en.pdf

Air France airliner sabotaged at Dusseldorf airport

A technical incident on an Air France A318 airliner was due to smoke-detector situated in the cargo hold being deliberately cut whilst the plane was on a stopover at Dusseldorf airport, Germany, say airline officials. An investigation has begun.

The plane was just about to take off for a flight from Dusseldorf to Roissy in Paris when an alert

light lit up, indicating a smoke-detector breakdown in the cargo hold, according to Le Figaro.

The alert, Level 2 category out of 5, did not impose the immobilization of the plane, so the pilot took off and the flight went normally.

When the breakdown was explored by Air France technicians however, they were shocked to find that two cable runs to a smoke detector unit had been sectioned by what seemed to be a cutter.

The saboteur is said by Air France to have good knowledge of the plane's electrical systems and is someone who has at least landing apron access to planes at Dusseldorf.

Air France has initiated a judicial enquiry into the incident in both France and Germany.

The airline, as well as judicial authorities, has indicated that it will not comment further on the incident for the moment.

Faulty parts contribute to Canada helicopter crash

A faulty tail rotor was to blame for the helicopter crash off Canada's east earlier this year that killed 17 people, federal investigators said Thursday.

The Transportation Safety Board found severely damaged tail rotor driver gears led to the deadly March 12 crash.

"Without that tail rotor drive, your directional control ability is much more difficult," said lead investigator Mike Cunningham. "In other words, the nose is going up, then the nose is going down and it's rolling to the left and it's rolling to the right."

The tail rotor also helps keep the helicopter in the air, Cunningham said.

The Sikorsky S-92A helicopter, piloted by two crew members, crashed

about 65 kilometers (40 miles) southeast of St. John's, Newfoundland, as it was carrying workers to two offshore oil platforms.

Investigators also found floatation devices failed to deploy when Cougar Flight 491 crashed, leaving the helicopter to sink into the ocean.

Earlier, officials had found two titanium mounting studs that attach to the main gearbox had cracked before the aircraft slammed into the ocean.

The loss of the studs would lead to a rapid loss of oil pressure and eventual loss of control of the helicopter, said agency officials.

Investigators are still trying to determine the origin of the cracks in the studs.

U.S. aviation officials have since ordered all titanium mounting studs on that model helicopter be replaced with steel as a result.

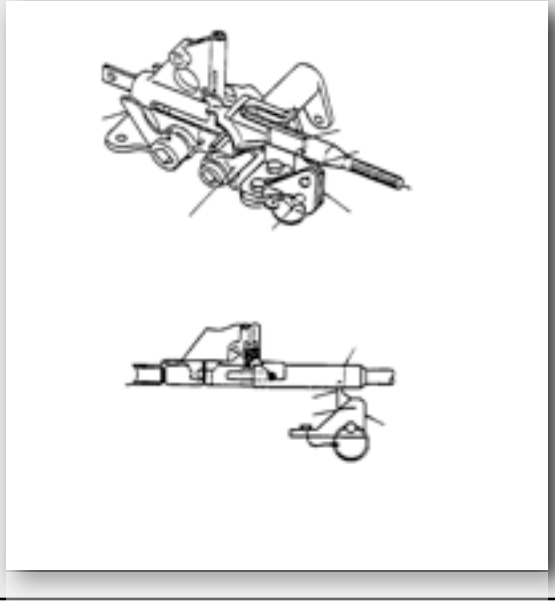
The families of 15 passengers who died in the crash and the one survivor, Robert Decker, are suing Sikorsky, Keystone Helicopters and their parent company, United Technologies Corporation.

A public inquiry has also been launched to examine safety conditions for offshore oil workers.

Escape Slide Separates in flight

Boeing 767-200. Minor damage. no injuries.

Inbound from Zimbabwe with 206 passengers and 10 crewmembers, the was on final approach to London Gatwick Airport the evening of Aug. 3, 2008, when the flight crew felt an unusual roll motion while extending the flaps 15 degrees. The motion stopped, and the crew landed the airplane without further incident.



"During their post-flight external inspection, the crew noticed that the compartment for the right overwing escape

slide was open and the slide itself was missing," said the report by the U.K. Air Accidents Investigation Branch (AAIB). "The actuating mechanism was hanging from the compartment and had caused slight dents and perforations in the adjacent fuselage skin." A few days later, a deflated escape slide was found on the ground below the approach path to Gatwick. "By that time, the aircraft had been repaired and had flown several subsequent sectors," the report said.

"The aircraft had been repaired and dispatched without a detailed inspection to determine the cause of the slide compartment opening." Boeing records show two broad categories of overwing escape slide detachment. The first involves activation of the inflation system while the slide compartment is closed and latched. "This 'blows' the compartment door open as the slide inflates and leaves telltale evidence." The AAIB determined that the incident at Gatwick fit the second category: "[This] involves, generally, a combination of incomplete latching and, in some instances, an element of mis-rigging or worn components," the report said.

Deadly 2007 Plane Crash in Brazil Blamed on Human Error

An investigation points to human error as the main cause of the July 2007 crash a TAM airlines plane at Sao Paulo's Congonhas Airport that left 199 people dead, the press said Thursday, citing an official report.

Diario de Sao Paulo said that a report by the aviation-safety agency, Cenipa, cited the late Capt. Kleber Lima for mistakes made under "pressure" by deciding to land in heavy rain on a runway with "inadequate conditions."

In addition, Lima reported three times in the five minutes preceding the crash that the aerodynamic brake was "inoperable."

Cenipa said that "at least eight factors contributed such that the commander left one of the engine power control levers in the acceleration position during landing. Only the left lever was located in the (proper) reverse position."

Data from the black box aboard the Airbus A-320 show the accident "could have

been avoided in 14 seconds if the pilot had pulled the lever to the neutral position," Cenipa said.

The investigation also found that there were failures in a visual and sound alert on board the plane which advises the crew of asymmetries in the positions of the levers and that the other two copilots "were not prepared to act."

TAM did not comment on the report and announced that it will only issue a statement on the matter when the accident investigation is concluded within the next 60 days.

The Cenipa report contradicts the one prepared by Sao Paulo state police, which emphasized the unfavorable landing conditions on the wet runway as the main cause of the accident.

Specifically, the runway lacked grooves to shunt the water from its surface in rainy weather, the police said. EFE