Safety News

SMS for Airlines

The U.S. Federal Aviation Administration (FAA) has proposed requiring most commercial airlines to establish a safety management system (SMS) to "give operators a set of business processes and management tools to examine data from everyday operations, isolate trends that may be precursors to incidents or accidents, and develop and carry out appropriate risk-mitigation strategies."

The new notice of proposed rulemaking (NPRM) follows a previous NPRM to require FAA-certified airports to establish an SMS for airfield and ramp areas.

©Jakub Jirsák/Dreamstime.com

"We need a holistic approach to safety that allows us to spot trends in aviation and make necessary changes to help avoid incidents and accidents," said FAA Administrator Randy Babbitt. "Safety management systems are a critical piece of a successful safety culture."

The NPRM would give scheduled air carriers operating under U.S. Federal Aviation Regulations Part 121 three years to implement an SMS. The FAA emphasized that the SMS requirement "would not take the place of regular FAA oversight, inspection and audits to ensure compliance with existing regulations."

Technological Upgrade

The Australian Civil Aviation Safety Authority (CASA) is seeking public comments on its 10-year plan to introduce new technology for aircraft communication, navigation and surveillance.

The proposal calls for the gradual installation of equipment to allow the use of satellite navigation by all aircraft capable of flight under instrument flight rules.

"There is a clear responsibility to the traveling public to transition to the new technology as both aviation safety and efficiency can be improved," CASA said.

The public-comment period was to end Nov. 30.

Design Review

The U.S. National Transportation Safety Board (NTSB), citing two accidents that were blamed on a passenger's inadvertent movement of the fuel flow control lever in a Eurocopter AS 350B, is asking two civil aviation authorities to require Eurocopter to review the lever's design.

The NTSB cited the April 15, 2008, crash of an AS 350B2 about 34 nm (63 km) east of Chickaloon, Alaska, that killed the commercial pilot and three passengers and seriously injured a fourth passenger (*ASW*, 5/10, p. 63).

The NTSB found that the probable cause of the accident was the loss of engine power following an overspeed of the turbine engine — an event that was "precipitated by the inadvertent movement of the fuel flow control lever (FFCL) by the (front-seat) passenger."

The NTSB also identified as a causal factor "the manufacturer's design and placement of the FFCL, which made it susceptible to accidental contact and movement by passengers." The FFCL is on the floor of the helicopter, near the front-seat passenger's right foot. In the Alaska crash, the passenger's backpack was on the floor, and the accident report said it was likely that either the backpack or the passenger's foot bumped the FFCL out of its correct position.

A similar accident occurred April 4, 1994, near High Prairie, Alberta, Canada, when the front-seat passenger "inadvertently moved the FFCL from the flight detent to the stop detent while trying to adjust a knapsack placed under his right knee." The helicopter lost power, and the helicopter touched down hard and rolled onto its left side after the pilot conducted an autorotation. No one was injured, but the helicopter was substantially damaged.

© Christopher Ebdon/Flickr

In its recommendations to the European Aviation Safety Agency (EASA) and the U.S. Federal Aviation Administration (FAA), the NTSB said that those two accidents, as well as other similar accidents and incidents, aroused concern that more accidents could occur because of the FFCL design. The NTSB asked both agencies to require Eurocopter to review the design of the FFCL or its detent track or both and to modify the device "to ensure that the FFCL is protected to prevent unintentional movement out of its detents and that it does not move easily to an unintended position."

A second recommendation asked the FAA to evaluate other helicopter models with similar FFCL designs and require similar modifications.

Uncommanded Trim

Airbus should alert A320-series operators of the possibility that an electrical problem could result in uncommanded operation of the rudder trim, the U.K. Air Accidents Investigation Branch (AAIB) says.

The AAIB cited an Aug. 24, 2010, electrical malfunction in an A321 during a scheduled night flight from Khartoum, Sudan, to Beirut, Lebanon.

"The more significant symptoms included the intermittent failure of the captain's and co-pilot's electronic displays and the uncommanded application of left rudder trim," the AAIB said in Special Bulletin S2/2010. "The flight crew also reported that the aircraft did not seem to respond as expected to control inputs."

The problems included flickering and blanking out of displays, including the primary flight display, navigation display and electronic centralized aircraft monitor (ECAM), the report said, adding that master caution annunciations and other messages appeared on the ECAM.

The uncommanded rudder trim resulted in a left-wing-low attitude and a deviation left of the planned track, the AAIB said.

After reading an ECAM message that said "ELEC GEN 1 FAULT," the crew turned off the no. 1 generator, and normal functions resumed, the report said. Turning the generator back on led to a resumption of the problems, so it was again turned off and the airplane was flown manually to Beirut, where the crew landed without further difficulty.

A review of data from the flight data monitoring program confirmed some of the crew's reports, and data analysis was continuing.

The report said that the problems "were believed to be attributable to an electrical power generation system fault" and that "the ECAM did not clearly annunciate the root cause of the malfunction and no information or procedures were available to assist the flight crew in effectively diagnosing the problem."

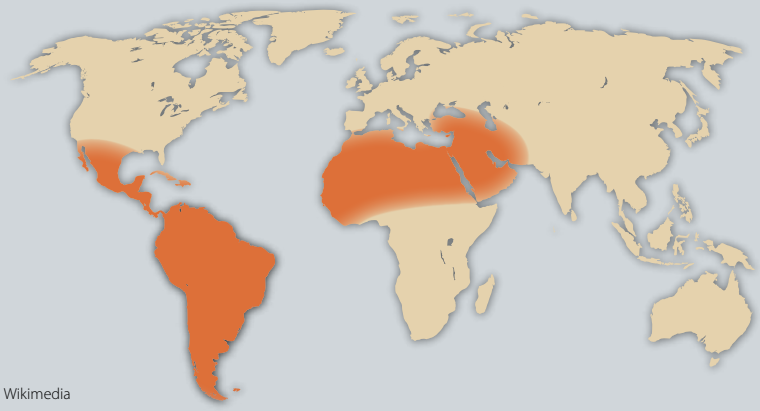
The AAIB recommended that Airbus alert operators of A320-series airplanes to "the possibility that an electrical power generation system fault may not be clearly annunciated on the ECAM and may lead to uncommanded rudder trim operation."

© Dylan Ashe/Flickr

Regional Challenges

Coordinated efforts are needed to respond to growth-related challenges in the Middle East and North Africa, whose air carriers now handle 11 percent of global air traffic, compared with 5 percent one decade ago, said Giovanni Bisignani, director general and CEO of the International Air Transport Association (IATA).

As air traffic has increased, so has the accident rate, Bisignani said, citing data that show 3.32 accidents per 1 million flights in 2009, compared with zero accidents in 2006.



Wikimedia

"At 4.6 times the global average of 0.71, that is a concern," Bisignani said, urging nations in the region to require their air carriers to undergo IATA's safety audits. Thirty-five carriers in the region already are on the registry for IATA's Operational Safety Audit (IOSA).

Assessing the state of the industry in Latin America, Bisignani said that aviation safety presents a "constant challenge" to both the industry and government regulators. He cited the region's hull-loss rate, which has fluctuated dramatically.

"A decade ago," IATA said, "the … rate for Western-built jet aircraft was seven times the global average. By 2009, that had improved to a perfect record of zero. Four tragic accidents in the first 10 months of 2010 have seen the accident rate increase to 3.2 times higher (2.36 Western-built jet hull losses per 1 million flights) than the 0.73 global average."

Bisignani said priorities for Latin America are increasing performance-based navigation procedures and addressing issues associated with runway excursions and congested airspace.

Aging Aircraft

In an effort to prevent aging aircraft from incurring structural damage, the U.S. Federal Aviation Administration (FAA) has finalized a rule requiring manufacturers to specify the number of flight cycles or flight hours that a commercial airplane may be operated.

Manufacturers have between 18 and 60 months to meet that requirement. After the limits are established, operators will have between 30 and 72 months, depending on the model, to incorporate those limits into their maintenance programs. After the limit has been incorporated into an operator's maintenance program, an airplane may not be flown beyond that limit without FAA approval.

"We've addressed the problem of aging aircraft with numerous targeted regulations and 100 airworthiness directives over the years," said FAA Administrator Randy Babbitt. "This rule is a comprehensive solution to ensure the structural safety of today's airliners and the airplanes of tomorrow."

The FAA said it is working with the European Aviation Safety Agency and national civil aviation authorities to harmonize rules in this area.

Wikimedia

In Other News ...

Japan and the United States have signed a memorandum of understanding designed to lead to establishment of an **"open skies"** agreement between the two countries. The agreement is intended to expand air service, encourage competitive pricing by airlines and protect aviation safety and security. … John McCormick, director of the Australian Civil Aviation Safety Authority, says his agency is on track to complete the modernization of aviation safety **regulations** by the end of 2011. About half of the required "refined" regulations already have been implemented, he said. … Eurocontrol has submitted to its member states a preliminary version of its specifications for **harmonized rules** for flight under instrument flight rules. Eurocontrol's goal is for the rules to be implemented around October 2011.

Airport Initiative

Airports worldwide are set to begin a safety initiative intended to focus on runway safety improvements and to reduce runway accidents.

The Airports Council International said that its new program — Airport Excellence in Safety (APEX) — is "designed to unite all regions in a proactive global safety improvement initiative, which will focus on a management systems approach."

Key elements of the initiative will include documentation, training and an "airport-to-airport mentoring program," ACI said.

Nightryder84/Wikimedia

Ad Rutten, CEO of Amsterdam Airport Schiphol, said the "compelling case" for adoption of the initiative includes findings from audits conducted from 2005 through 2010 by the International Civil Aviation Organization, which found that 58 percent of the audited countries do not have procedures for airport certification and 69 percent do not have runway safety programs.

Rutten also cited Flight Safety Foundation data showing that 30 percent of all major damage accidents worldwide from 1995 through 2008 were runway-related.

Compiled and edited by Linda Werfelman.