Safety News

Takeoff Performance Monitoring System Sought

The Transportation Safety Board of Canada (TSB) says it will work with Transport Canada (TC) on preliminary research to determine whether a takeoff performance monitoring system could be designed to give flight crews "an accurate and timely indication of inadequate takeoff performance."

TC suggested the research in response to a TSB safety recommendation calling for installation of such equipment in transport category aircraft.

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In the response, TC said its representatives were "not aware of any certified system that is available at this time to meet this recommendation" but that "it is conceivable that such a system could be designed by current technology."

The TSB recommendation followed investigation of an Oct. 14, 2004, accident in which an MK Airlines Boeing 747-200SF crashed on takeoff from Halifax, Nova Scotia; all seven crewmembers were killed and the airplane was destroyed. The TSB said that the accident was a result of the crew's unintentional use of an incorrect aircraft weight to calculate takeoff speeds and thrust settings. The takeoff speed and thrust setting were "significantly lower than those required to become safely airborne," and the crew did not recognize the problem until the airplane had passed the point where they could safely reject the takeoff, TSB said (*ASW*, 10/06, p. 18).

'Back of Clock'

Flight crews on single-sector overnight transcontinental flights from western Australia to the east were unlikely to be significantly affected by related sleep patterns and fatigue, a report by the Australian Transport Safety Bureau (ATSB) says.

However, when the transcontinental flight was followed by an additional sector on the east coast, the report said, "there is evidence of reduced prior sleep, impaired neurobehavioral performance and high levels of subjective fatigue."

The report discussed a study of "typical transcontinental back-of-clock route pairings" — usually from Perth in the west to Melbourne, Sydney or Brisbane in the east. During the 14-day study, 37 participating crewmembers were required to wear an activity-monitor wristwatch; maintain sleep and duty diaries in which they recorded their "time of sleep, subjective alertness and time of duty"; and complete a five-minute "reaction time task" during cruise on each sector and three times on non-flight days.

When crews conducted a transcontinental flight, plus an additional east coast sector, they averaged less than 5.5 hours of sleep during the 48 hours before the final landing, and most categorized their condition as "extremely tired" or "completely exhausted," the report said.

The report said that fatigue risk management systems (FRMS) are being developed to provide organizations and their personnel with tools to manage fatigue by identifying behavioral symptoms of fatigue — not only by complying with flight and duty time regulations.

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Emergency Action on 737 Spoilers

The spoilers on certain Boeing 737-800s must be inspected after every landing and rejected takeoff to determine that they are in the correct position, the U.S. Federal Aviation Administration (FAA) said in an emergency airworthiness directive (AD). If a spoiler is found in the "UP" position while the speed brake handle is down, maintenance personnel must be notified.

The AD was issued in mid-March, as a result of reports of seven flight spoiler actuator jams on 737-800 short field performance (SFP) airplanes. Two of the jams, involving in-service airplanes, were discovered during routine maintenance walk-arounds; they probably occurred during auto speed brake extension on the previous landing, the FAA said. The five other reports occurred during testing of the spoiler systems by Boeing before the airplanes were delivered. Two additional jams occurred during bench testing after Boeing began investigating the reports.

The FAA said that the in-service failures resulted in the spoilers remaining extended after the speed brake handle was moved to the "DOWN" position after landing.

"This condition, if not corrected, could result in a spoiler actuator hardover, which could cause the spoiler surface to jam in the fully extended position," the FAA said. "Two or more hardover failures of the spoiler surfaces in the up direction on the same wing, if undetected prior to takeoff, can cause significant roll and consequent loss of control of the airplane."

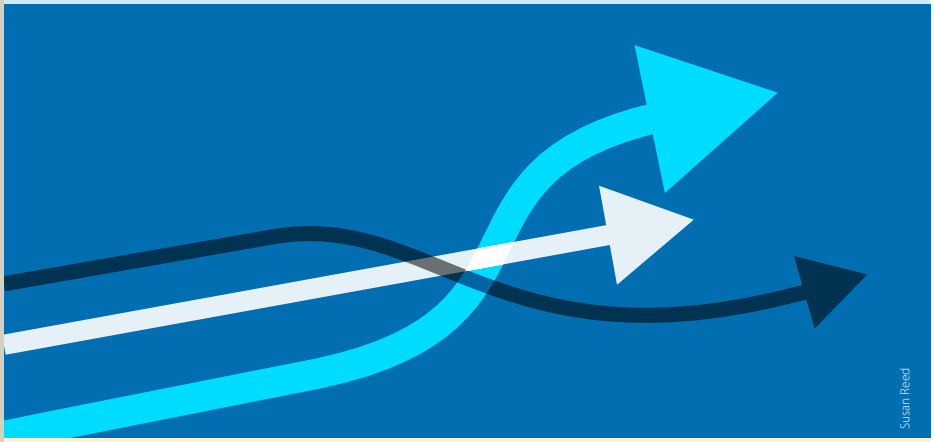
Endorsing Offset Procedures

The International Federation of Air Line Pilots' Associations (IFALPA) is urging wider use of strategic lateral offset procedures, which allow pilots to fly parallel to and slightly to the right of airway centerlines, to reduce midair collision risks (*ASW,* 3/07, p. 40).

During a meeting in Dubrovnik, Croatia, IFALPA called on all member nations of the International Civil Aviation Organization (ICAO) to "urgently implement" offset procedures "in all appropriate airspace."

"The Federation has argued for more than 20 years, since the advent of highly accurate navigation systems, that [offset procedures] are vital to reduce the risk of midair collisions and firmly believes that a globally standardized [procedure] is the most effective measure to mitigate the risk of these types of midair collisions," IFALPA said.

After the implementation of reduced vertical separation minimum (RVSM) procedures over the North Atlantic in 1997, offset procedures were approved for use on some routes to help alleviate wake turbulence and reduce the possibility of a collision in the event of a vertical error in navigation.



Susan Reed

Obstacles to a 'Single Sky'

European transportation officials "still have some way to go" in implementing the Single European Sky (SES) initiative, but a recent report indicates that reorganization of air traffic management was a positive step, European Commission Vice President Jacques Barrot says.

The report, prepared by the independent Eurocontrol Performance Review Commission at the request of the European Commission, said that the initiative has improved cooperation between member states and air navigation service providers and led to some improvements in efficiency and the reporting of safety incidents.

EUROCONTROL

Nevertheless, the report said that potential weaknesses of the SES include "a risk that SES requirements will over-regulate, creating burdens without compensating benefits." In addition, there is "no guarantee that the SES in its current form will produce tangible performance improvements in respect of efficiency and thus address effectively the key current issues in [air traffic management]," the report said.

Bird Flu Guidelines

Guidelines have been developed for airports and airlines in the event of an outbreak of avian influenza — commonly known as bird flu — or other communicable diseases, the International Civil Aviation Organization (ICAO) says (see *Human Factors & Aviation Medicine*, November–December 2005).

"A preparedness plan for aviation is required since air travel may increase the rate at which a disease spreads, thereby decreasing the time available for preparing interventions," ICAO said in the preface to the guidelines, developed along with the International Air Transport Association and the Airports Council International, as well as the United Nations World Health Organization and the U.S. Centers for Disease Control and Prevention. The aviation-specific guidelines accompany general preparedness guidelines directed toward national governments worldwide.

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The aviation guidelines say, among other things, that airports should develop plans for operating with "greatly reduced staff numbers" and that airlines should establish a system by which cabin crewmembers can detect travelers suspected of having a communicable disease.

In addition, a new provision for ICAO Annex 9, *Facilitation,* calls for introduction of a "passenger locator card" to be used by public health officials to trace passengers who might have been infected with a serious communicable disease.

In Other News ...

Capt. Carlos Limón, an Airbus A320 pilot for Mexicana Airlines and a member of the Flight Safety Foundation International Advisory Committee, has been elected president of the International Federation of Air Line Pilots' Associations. … The **U.S. National Transportation Safety Board (NTSB)**, which has investigated 130,000

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aviation accidents since its creation in April 1967, plus thousands of accidents in other modes of transportation, has marked its 40th anniversary. In those 40 years, the NTSB issued 12,600 safety recommendations, about 82 percent of which were accepted. … The **Port Authority of New York and New Jersey** has authorized the design and construction of engineered materials arresting systems (EMAS) at three of its airports — Kennedy International Airport in New York, Newark (New Jersey) Liberty International and Teterboro (New Jersey) Airport. EMAS arrestor beds are built from aerated cement blocks designed to stop an airplane quickly and safely if it overruns a runway (*ASW*, 8/06, p. 13).

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Engineered materials arresting system

Clarification: Erik Eliel of Radar Training International (*ASW*, 04/07, p. 46) has been invited to make a 50-minute presentation at the 11th Safety Standdown.

Compiled and edited by Linda Werfelman.