

United Airlines Questions Use of Foam in Belly Landings

Washington—UPI—United Airlines has questioned the use of one of aviation's oldest safety devices — spreading foam on runways for belly landings.

For a major air carrier to challenge runway foaming was roughly the equivalent of denouncing virtue. But United, citing recent tests by the Naval Research Laboratory, said many of the alleged advantages appear to be fiction. Its criticism was made in "The Cockpit," a newsletter

distributed to its flight crews. It said runway foaming is used because of a widespread belief that (1) it forms a cushion for a disabled aircraft, (2) it decreases the friction between the aircraft and the runway as it slides on its belly, and (3) it reduces the chances of fire.

May Be Exaggerated

United said the Navy tests showed these so-called advantages may be exaggerated. It said foam does not form much of a cushion; that it consists

generally of 10 parts of air to one part of water. "From this it is obvious that a two-inch blanket of foam containing over 90 per cent air cannot form a 'cushion' for an aircraft as it touches down. The ease of touchdown is strictly pilot technique."

United said the Navy experiments also showed that foam, as it is generally compounded, is not a particularly good lubricant for decreasing friction. It pointed to tests in which fuselages were dragged

first on a dry runway and then on one covered with foam. They indicated a difference of only three per cent in ability to reduce friction—which United noted compared favorably with the friction-decreasing qualities of a runway covered by water in a rainstorm.

Depends on Variables

Nor is foam a completely efficient agent for suppressing sparks and/or fire, United said. Much, the airline explained, depends on such vari-

ables as the type of runway construction, the type of aircraft metal and the depth and age of the foam. It cited the Navy tests as demonstrating that both a thin foam layer and a thick one have little effectiveness in preventing fire.

"It was also discovered that any breaks or bare spots in the foam blanket would allow the metal to start sparking, causing ignition of the fuel mist, and the resultant fire would not be extinguished

when the test sample reentered the foam area," the airline said.

United quoted a Navy survey of belly landings made on runways at U. S. Naval air stations. The statistics showed 16 wheels-up landings made on foamed runways that resulted in only one fire. In 70 belly landings made without foam, there were 15 fires.

Available U. S. Air Force records, it continued, show one fire in 24 landings on foamed runways. There were

seven fires in 34 landings made without foam.

Statistics Look Good

"These statistics look good for the case of foam," United said. "Unfortunately, however, records were not available for these instances showing the number of times fuel was spilled due to rupture of tanks or lines. Since spillage of fuel is a prime requisite to having a fire, these favorable statistics are subject to quite a bit of critical comment." United emphasized that it

was not telling pilots never to ask for foam coverage. It said the final decision is still left to the captain. And it advised pilots to take various factors into consideration —

particularly the length of time in which it would take airport workers to spread foam on runways used by jets.

LOSES ALL AROUND

Shawano, Wis.—UPI—The law enforcement committee of the county board of supervisors plans to study Sheriff Carl Krueger's demotion of deputy Edward Bahr. Bahr, who unsuccessfully ran against Krueger in last Tuesday's primary election, was demoted for "insubordination."

Q. AND A.

Stanton, Mo.—UPI—Meramec Caverns here is on Route 66. A tourist asked cave director Lester B. Dill: "Which was here first, Route 66 or the Cave?" "I don't know," quipped Dill, "but the cave is 100 million years old."

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