December 1970

Brief 70-10712

NASA TECH BRIEF

A New Method for Measuring Slipperiness of Airport Runways and Other Paved Surfaces

The problem:

With the advent of larger and faster jets in commercial and military aviation, a method of accurately predicting aircraft stopping distances on wet runways is necessary and desirable in preventing major disasters and improving safety.

The solution:

Aircraft stopping distances on wet runways can be accurately predicted by measurements taken with a conventional automobile equipped with a diagonal braking system and simple instrumentation for recording stopping distances.

How it's done:

The test automobile is driven down the runway at a speed of 60 miles per hour. The stopping distance of the automobile, using the diagonal braking system, is measured for locked wheel skids under both wet and dry runway conditions. The ratio of measured wet-to-dry stopping distances shows good correlation to the wet-to-dry stopping distance ratios experienced by several representative aircraft during extensive comparative testing on a wide variety of runway surfaces and surface conditions.

Note:

Requests for further information may be directed to:

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Reference: TSP70-10712

Patent status:

No patent action is contemplated by NASA.

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