



U.S. Department
of Transportation

Federal Aviation
Administration

Advisory Circular

Subject: Change 4 to AIRPORT WINTER SAFETY AND OPERATIONS

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Change: 4

1. PURPOSE. This Change modifies guidance provided in reporting runway friction values measured under winter operational conditions.

winter operational conditions. Airport operators who report runway friction values are now advised to report the type of device used in performing measurements.

2. PRINCIPAL CHANGES. New research has shown that friction measuring devices currently in use do not necessarily provide equivalent readings under

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for each zone, so the three readings are averaged and reported as 30.

(6) Conducting Friction Surveys Using CFME. A friction survey is recommended for the full length of runway to determine the average friction value for each zone. The survey may be conducted at any speed up to 40 mph (65 km/h) as safety considerations allow. Some towed devices (trailers), however, can become unstable, and thus provide unreliable data, when operated at speeds above 20 mph (32 km/h) on contaminated pavements.

(7) Recording Friction Survey Data. The equipment operator should record all data and observations obtained from friction surveys. Data and observations recorded can be used to assess the effectiveness of runway surface treatments and snow removal operations; and may be helpful in accident or incident investigations. Table 2 is a suggested form which can be used for this purpose. The remarks column can be used to record pilot braking action reports and associated aircraft type, and other observations of any unusual conditions existing when the friction surveys were conducted. The CFME and electronic decelerometers provide the airport operator with their own records. These records may be used to augment the suggested form as appropriate.

14. PAVEMENT CONDITION REPORTING.

a. When To Report Friction Values. Friction values should be reported to interested parties:

(1) whenever compacted snow and/or ice are present on the center 60 feet (18 m) of the runway, and friction values are below 40 on any zone of the runway; and

(2) when friction values rise above 40 on all zones of any active runway previously showing a friction below 40.

Note: Friction values are technically decimal numbers (e.g. .10, .24, .30), but are generally referred to using whole numbers (e.g. 10, 24, 30) for convenience. Confusion between the decimal and whole numbers is rarely a problem.

b. Report Contents. The friction report should identify the friction tester type and the runway number, followed by the average friction numbers for each of the three runway zones (rounded to the nearest whole number), a short description of the cause of the runway

friction problem, and the time of the report. It is especially important that pilots be advised of patchy conditions that may result in different braking action on various sections of the runway. Example:

The friction measuring equipment operator conducts a survey on runway 14R with CFME and obtains averages for the touchdown, midpoint, and rollout sections of 23, 27, and 32 respectively. He/she notes that the surface is contaminated by compacted snow, with patches of ice. The survey is completed at 10:15 am. The report transmitted to air traffic control would be "[Name of FAA-approved friction tester] friction tester values for runway 14R, 23, 27, 32, compacted snow with patchy ice at one zero one five.

c. Reporting Procedures. The procedure for transmitting friction values to air traffic control for dissemination to pilots may vary from airport to airport. The letter of agreement between the airport operator and air traffic control should spell out the procedures and formats for each type of event - runway closure, friction survey results, runway treatment, etc. For example, certain friction equipment manufacturers offer the airport operator an optional data link system that provides direct transmission of the friction measuring equipment data to airport operators, or air traffic control, or both. Reports may also be furnished to local operators, airlines, or other users. In the absence of a control tower on the airport, the report should be supplied to the air traffic control facility that provides approach control service or to an appropriate flight service station (FSS), fixed-base operator (FBO), or other authority to broadcast on the Unicom, Common Traffic Advisory Frequency (CTAF), or Airport Advisory Service Frequency.

d. Out-Of-Service Friction Measuring Equipment. During winter operations, if friction values taken on compacted snow and/or ice have been issued on a regular basis and the equipment used to obtain these values is not available, a Notice to Airmen (NOTAM) should be issued and maintained until the equipment is restored to service. Meanwhile, runway advisories may be issued using other means of observation (e.g., pilot reports).

15. NOTAMS. Airport operators are responsible for issuing NOTAMS. AC 150/5200-28, Notices to Airmen (NOTAMS) for Airport Operators, provides details of format and abbreviations for use in reporting winter conditions on aircraft movement areas. See Appendix 1 for examples of NOTAM snow reports.