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15. Supplementary Notes (Funding programs, titles of related publications, etc.)

Several research reports for testing of de/anti-icing technologies were produced for previous winters on behalf of Transport Canada. These are available from the Transportation Development Centre (TDC). Several reports were produced as part of this winter's research program. Their subject matter is outlined in the preface. This project was co-sponsored by the Federal Aviation Administration.

16. Abstract

This report documents two research projects that were carried out to assess the need for remote on-ground ice detection systems (ROGIDS) to be located and used at the takeoff end of the runway in winter conditions.

- Flight Crew Survey: A survey of Canadian, American and international pilots was carried out to gather information from pilots on pre-takeoff contamination checks, to determine if pilots would accept / want a ROGIDS at the departure end of the runway and to gather anecdotal information on frequency of deicing-related turnbacks. 756 responses were received. The responses illustrated general support from pilots for ROGIDS use at the end of the runway. They also revealed that many pilots do not receive adequate training to identify fluid failure and that several obstacles prevent pilots from being able to conduct the needed contamination checks adequately.

- Analysis of Incident Reporting Data: Two incident reporting databases (CADORS and ASRS) were investigated with the objective of determining if ROGIDS could have prevented any reported incidents from occurring. One of the databases (CADORS) did not provide sufficient detail in each report to make this assessment. The ASRS database was filtered to select 42 relevant reports spanning a ten year period. It was determined that a ROGIDS could have a significant impact on the number of aircraft ground icing safety incidents, especially if located at the departure end of the runway (which could likely have prevented half of the incidents reviewed).

As a result of the information gathered in these two research projects, it is recommended that resources be allocated to advance the use of ROGIDS technology for the end-of-runway application.

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