



Safety recommendation no. 527

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Safety deficit	<p>On 9 February 2016 at Zurich Airport, seven luggage trolleys, which were connected in a row, were moved by stormy winds and rolled on their own across the landing runway which was in operation at the time. This endangered a commercial aircraft, which landed shortly afterwards.</p> <p>In addition to the inadequate securing of the luggage trolleys, it was determined that the cause of this serious incident was that the existing warning systems designed to guard the runway area from unauthorised runway access did not emit a warning.</p>
Safety recommendation	The Federal Office of Civil Aviation, together with Skyguide air traffic control and aerodrome operators, should examine the extent to which the existing systems that warn of unauthorised runway access could be modified so that they include operating materials such as trolleys and similar items.
Addressees	BAZL Bundesamt für Zivilluftfahrt
Stage of the implementation	<p>Implemented. FOCA has implemented the safety recommendation as follows: Zurich Airport has assessed the modification of the existing runway incursion monitoring and collision avoidance system (RIMCAS) and concluded that this is not a suitable tool for detecting smaller objects such as luggage trolleys. The introduction of an additional system (e.g. a radar for the detection of foreign-object debris (FOD) had already been considered some years ago but was dismissed because of the state of the technology available at the time. The serious incident on 9 February 2016 has led to a reconsideration. With the partial replacement of the ground radar, which is planned for the end of 2018, it has been assessed whether objects, such as the luggage trolleys or even FOD, on runway 28 could be detected using a system of this kind. Due to the fact that this has proved impossible, a re-examination will take place in the context of a later replacement of the entire ground radar. Together with Skyguide, Geneva Airport has adapted the existing RIMCAS so that primary echoes are not hidden as before. This measure had already been initiated before the incident on 9 February 2016. In addition, the installation of an FOD radar has been assessed by the end of 2017, but rejected due to the current state of the technology. Furthermore, a process on the inspection of the technical condition of ground equipment, in particular luggage trolleys, has been carried out and parking zones for luggage trolleys, in particular in the case of weather-related risks, has been defined by the end of 2017. The recommendation is not relevant for safety at other airports as they don't have a lot of operating material and luggage trolleys are not parked on the apron. A warning system for unauthorised runway access is not installed and would be</p>

disproportionate.

In the follow-up to the serious incident, FOCA has carried out a risk assessment on this topic and added the risk posed by insufficiently secured mobile ground equipment to the register. Furthermore, the measures taken by the airports and documented in the aerodrome manual as part of its supervisory role will be checked at regular intervals.

**Investigation report concerning
the safety recommendation**

Schlussbericht
