SYNOPSIS

On 18 January 2016 an Embraer EMB 120 ER "Brasilia", with registration EC-JBD, performed a cargo flight from Amsterdam Airport Schiphol in the Netherlands to London Stansted Airport in the United Kingdom. On board were two pilots, and at approximately 17.25 hours the take-off was performed from Runway 24. The flight continued towards the destination airport where a landing was performed and at 18.40 hours the aeroplane was parked. After shutdown, the ground crew discovered holes in the right-hand side fuselage. Furthermore, the right-hand propeller blades were damaged and in one propeller blade a metal wire was found embedded in the leading edge. Following this damage the local authorities were notified, including the Air Accidents Investigation Branch (AAIB).

According to the flight crew, nothing out of the ordinary happened during the flight. The London Stansted Airport authority initiated a runway check, however, no irregularities were found. The AAIB notified the Dutch Safety Board (DSB) of the event and provided information on the metal wire found in the propeller blade at London Stansted.

Following this information, the DSB made inquiries at Amsterdam Airport Schiphol about occurrences that night and asked if a check could be performed on Runway 24. Amsterdam Airport Schiphol (AAS) had already performed a runway check the evening before, which revealed that seven runway edge lights were destroyed. From this, it was suspected that the event occurred at Amsterdam Airport Schiphol. The DSB classified it as a serious incident and started an investigation as the State of Occurrence. On behalf of the State of the Operator and State of Registry, the Spanish CIAIAC[2] provided assistance in the investigation. The Brazilian CENIPA[3] represented the State of Design and State of Manufacture.

During the investigation it was determined that the EMB 120 made a misaligned take-off from Runway 24 at Amsterdam Airport Schiphol. Misaligned take-offs occur all over the world and investigations by different authorities have identified several common causal factors. In this investigation it was determined that a combination of operational and infrastructural factors contributed to the event. The large turning angle, required to align the aeroplane with the runway centre line, in combination with the discontinuity of the taxiway S5 centre line and absence of the taxiway centre line lighting has contributed to the misaligned take-off. In addition, the ATC clearance during the turn from taxiway B onto S5 and Runway 24 might have distracted the flight crew.

Cooperating and learning

Similar to the report entitled 'Safety of Air Traffic at Amsterdam Airport Schiphol', published by the DSB in April 2017, the Safety Board also investigated how, in this case, the Dutch sector parties dealt with the cooperation and learning aspects of this serious incident.

[2] Comisión de Investigación de Accidentes e Incidentes de Aviación Civil, Spain.
[3] Centro de Investigação e Prevenção de Acidentes Aeronáuticos, Brazil.

As a result of the occurrence, both Amsterdam Airport Schiphol (AAS) and Air Traffic Control the Netherlands (Luchtverkeersleiding Nederland, LVNL) conducted investigations into the cause and each wrote a report. LVNL's report states that the investigation was conducted by LVNL in cooperation with AAS.

AAS's report states that no clear conclusions could be drawn and therefore no recommendations can be made. LVNL's report on the other hand, which includes the mutually harmonised results of both AAS and LVNL, reports the immediate cause, underlying causes and makes a recommendation. The recommendation is to bring the investigation results to the attention of the Runway Safety Team (RST) for any further advice. The RST is part of the Schiphol Safety Platform and it has the objective of reducing runway incursions at Schiphol.

LVNL was aware of the risks of intersection take-offs before the incident occurred. However, this did not lead to operational measures by LVNL.
Intersection S5 was also a recommended intersection outside the uniform daylight period despite the fact that the intersection did not have centre line lighting.

The LVNL report does not consider the question of whether intersection S5 is justifiably designated as a 'recommended intersection' in the Operations Manual and if offering the intersection concerned is a wise choice.

After the decision was taken not to install centre line lights on intersection S5, LVNL retained the qualification of intersection S5 as a 'recommended intersection' in the Operations Manual. There was no reconsideration.