

No. 6

Garuda Indonesian Airways, Douglas DC-3, PK-GDY, crashed into the sea near the north coast of the Island of Madura, on 3 February 1961. Aircraft Accident Report released by the Ministry of Air Communications, Republic of Indonesia.

Circumstances

Flight GA-542 took off at 2335 hours from Perak Airfield, Surabaya on a scheduled flight to Balikpapan. Aboard were 5 crew and 21 passengers. The aircraft and crew were on the third day of a four day trip.

At approximately noon on 4 February the aircraft was reported missing. Efforts by a search and rescue team to locate the aircraft were unsuccessful, however, it was believed that the aircraft had crashed into the sea off the Island of Madura. No trace of the occupants was found.

Investigation and EvidenceThe Aircraft

The aircraft was sent to Hongkong for a complete overhaul in March 1957 at which time all required modifications were incorporated.

The maintenance of the aircraft had been accomplished according to a progressive maintenance schedule. During the last major (500 hours) inspection, carried out between 26 and 31 December 1960, both engines were changed. Since then engines Nos. 1 and 2 had flown 44:45 hours each, during which time maintenance records showed a history of engine vibrations. Trouble rectification included change of the automatic mixture control, change of the spark plugs, a valve timing check, oil check for metal particles and retightening of the propeller nut.

The airframe had a total of 18 829 hours.

The Crew

All crew members were correctly certificated.

Weather conditions

The weather conditions en route (between Surabaya and 50 NM out) were fair to cloudy. The wind was 10⁰/10 kt; strato-cumulus cloud from 7 000 to 9 000 ft, 3/8 - 5/8 cloud coverage, a base of 1 500 - 2 500 ft cumulus cloud with tops of 5 - 7 000 ft becoming cloudier to the north with signs of precipitation.

Reconstruction of the flight

The flight departed Perak at 2335 hours. It first contacted Surabaya control on 119.3 Mc/s and reported it was on course at 2338 hours, climbing to (cruising) flight level 90 on a northwesterly heading. At that time it estimated the boundary of the control area at 0022 hours. This message was acknowledged by air traffic control, and the captain was instructed to report when reaching flight level 90.

At 2346 the flight advised that it estimated its arrival at Balikpapan at 0242, was climbing to flight level 90 and estimated the boundary at 0022. Masalembo at 0041, abeam Bandjarmasin at 0126 and Warukin at 0201 hours. The flight reported reaching flight level 90 at 2355 hours and was then instructed to report over the boundary. Nothing more was heard from the aircraft. It sent no emergency message.

Findings

The flight had been properly planned and dispatched. At the time of take-off

its gross weight was 36 lb under the maximum permissible take-off weight, and the centre of gravity was within limits. No discrepancies were found in the maintenance of the aircraft. There were no records of the aircraft carrying dangerous materials or explosives. Samples of fuel were checked and found to be normal. There were no indications of foul play.

Due to a lack of evidence, the investigating committee could not come to a positive conclusion as to what actually happened to the aircraft. A strong lead was some aircraft items found on the day the aircraft was reported missing. From these items it was deduced that the aircraft may have crashed not too far from Surabaya. However, none of the items found showed positive proof that it belonged to the aircraft in question. A reconstruction of the accident, using the items and the people that found them, indicated that the probable site of the accident could have been about 33 NM northeast of Surabaya. This spot coincides

with the normal track of the aircraft. Every effort was made with the assistance of the Navy to locate more positive evidence in the area. A weak echo was detected by the Navy's sonar equipment in that area. Due to circumstances, no further efforts could be made to locate the source of the echo coming from the bottom of the sea.

Probable Cause

The probable cause of the accident was not determined as the aircraft could not be found.

Follow-up action

Following the accident a fleet inspection of Garuda's Dakotas was carried out, which included wing attach angle checks, flight control system checks, electrical wiring checks, a corrosion check of the aircrafts' primary structures. No serious discrepancies could be found.
