Australian Government
Australian Transport Safety Bureau

ATSB TRANSPORT SAFETY INVESTIGATION REPORT
Aviation Occurrence Report – 200700080
Final

Crew Incapacitation
Near Cairns Airport, Qld
10 January 2007
VH-QPA
Airbus Industrie A330-303

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Abstract

The Airbus Industrie A330-303 aircraft was being operated on a scheduled passenger service between Hong Kong and Sydney. The pilot in command and second officer were seated at the aircraft control stations while the copilot was in the crew rest area.

In the course of discussions between the pilot in command and second officer, it became evident to the pilot in command that the second officer was no longer responding to conversation. Upon checking, the pilot in command found the second officer to be suffering from what he believed to be a seizure. He was removed from the operating station and replaced by the aircraft's copilot.

The second officer was removed to the crew rest area and immediately attended by a medical practitioner who was travelling on the flight. The flight continued to Sydney.

THE AUSTRALIAN TRANSPORT SAFETY BUREAU

The Australian Transport Safety Bureau (ATSB) is an operationally independent multi-modal Bureau within the Australian Government Department of Transport and Regional Services. ATSB investigations are independent of regulatory, operator or other external bodies.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

The ATSB performs its functions in accordance with the provisions of the Transport Safety Investigation Act 2003 and Regulations and, where applicable, relevant international agreements.

Purpose of safety investigations

The object of a safety investigation is to enhance safety. To reduce safety-related risk, ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not the object of an investigation to determine blame or liability. However, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

Developing safety action

Central to the ATSB's investigation of transport safety matters is the early identification of safety issues in the transport environment. The ATSB prefers to encourage the relevant organisation(s) to proactively initiate safety action rather than release formal recommendations. However, depending on the level of risk associated with a safety issue and the extent of corrective action undertaken by the relevant organisation, a recommendation may be issued either during or at the end of an investigation.

The ATSB has decided that when safety recommendations are issued, they will focus on clearly describing the safety issue of concern, rather than providing instructions or opinions on the method of corrective action. As with equivalent overseas organisations, the ATSB has no power to implement its recommendations. It is a matter for the body to which an ATSB recommendation is directed (for example the relevant regulator in consultation with industry) to assess the costs and benefits of any particular means of addressing a safety issue.

About ATSB investigation reports: How investigation reports are organised and definitions of terms used in ATSB reports, such as safety factor, contributing safety factor and safety issue, are provided on the ATSB web site www.atsb.gov.au.

FACTUAL INFORMATION

The Airbus Industrie A330-303 was being operated on a scheduled passenger service between Hong Kong and Sydney. The flight crew consisted of three pilots, the pilot in command, a copilot and a second officer. After entering the Brisbane Flight Information Region, and with approximately two and a half hours of flight time remaining, the pilot in command and second officer were seated at the aircraft control stations. The copilot was in the crew rest area.

At about 1745 Eastern Standard Time[1], the pilot in command and the second officer were engaged in conversation when it became apparent that the second officer was no longer responding. The pilot in command noticed that the second officer had sighed a couple of times and that his left fist was tightly clenched. He did not respond to touch, and foam had formed around one side of his mouth. The pilot in command immediately sought assistance from the cabin crew. The second officer was removed from the operating position to the flight crew rest area and replaced at the operating position by the copilot.

Initial medical attention was provided by one of the cabin crew who held nursing qualifications. A medical practitioner, who was a passenger on the aircraft, was requested to provide an assessment of the second officer's medical condition. The medical practitioner was able to seek further advice through radio contact with the airline's medical centre at its Sydney base. The second officer was deemed to not require further immediate medical attention so the pilot in command elected to continue onto Sydney. Upon arrival, the aircraft was met by an ambulance which transported the second officer to hospital for observation and further assessment. It was later confirmed that he had suffered a neurological seizure.

The second officer was a flight crew member on the previous Sydney to Hong Kong sector. The crew had been scheduled for a thirty six hour rest period before signing on for the return flight to Sydney. The second officer reported that, during the rest period, he briefly spent time with a friend, although most of the time was spent resting. Shortly after arriving in Hong Kong, he consumed a small amount of alcohol. He reported feeling fit and well when he signed on for duty in Hong Kong.

The flight from Hong Kong to Sydney was the second officer's second after having returned to duty from an extended period of sick leave. In May 2006, he suffered a seizure which resulted in the Civil Aviation Safety Authority (CASA) suspending his Class 1 Medical Certificate pending specialist neurological assessment. That action was in accordance with the International Civil Aviation Organization's (ICAO) medical provisions for licensing.[2] Prior to that May 2006 occurrence, the second officer reported never having experienced any previous seizure event.

The second officer subsequently underwent detailed neurological testing, assessment and monitoring. Medical specialist advice to CASA was that the initial

1 The 24-hour clock is used in this report to describe the local time of day,Eastern Standard Time (EST), as particular events occurred. Eastern Standard Time was Coordinated Universal Time (UTC) + 10 hours.

2 The International Civil Aviation Organization publication *Manual of Civil Aviation Medicine* (Doc 8984), provides guidance material intended to assist licensing authorities and medical examiners.

event, which was diagnosed as a provoked or acute symptomatic seizure, was likely to be the result of a coincidence of a number of factors.

Following extensive medical testing, screening and review, the specialist neurological advised CASA that the first seizure was likely to have been a single event. The prognosis was that there was minimal risk of any recurrence. After consideration of that advice, CASA renewed the pilot's Class 1 Medical Certificate in January 2007, with the provision that a neurologist's report accompany any request for subsequent renewal of the certificate.

Upon receipt of information confirming that the pilot had suffered a second neurological seizure, CASA revoked the pilot's medical certificate.