



**Aviation Safety Council
Taipei, Taiwan**

**FAR EASTERN AIR TRANSPORT
FLIGHT EF1201 VEERED OFF RUNWAY
WHEN TOUCHDOWN**

Executive Summary

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On April 24, 2000, at 07:30 local time (Chiayi, Taiwan), Far Eastern Air Transport Flight EF1201, registration no.B-28001, aircraft type MD-82, departed from Songshan Airport to Chiayi Airport, Chiayi Tower took over the aircraft when the aircraft started descent at the destination, and issued landing clearance and provided weather information : “wind is 280 degrees 8 knots, Runway 36, QNH 2985, Runway wet, clear to land.” The aircraft encountered rain when passing through 300 feet, but the pilot could still see the runway lights and the runway, and decided to land. At 50 feet, the aircraft was uplifted suddenly, the pilot reduced thrust a little bit to correct it, before touchdown the rain turned heavy and the visibility was extremely poor from the cockpit that the pilot could not see references outside the window. Since they were about to touch down, the pilot decided to continue landing. When they regained visibility, they found themselves rolling on the grass left side of the runway, no casualties and the aircraft suffered minor damages.

Findings

1. All the flight crew possessed qualified licenses according to the current Civil Aviation Act and company regulations.
2. The aircraft had completed all airworthiness directives and obtained an airworthiness certificate.
3. No abnormalities in the maintenance records of the aircraft, weight and balance was within limits.

4. After Chiayi Tower took over the aircraft , the landing clearance was issued and weather information was provided , ” Clear to land” and confirmed by the crew.
5. The aircraft had aimed at runway when 50 feet above ground, attitude was corrected several times but the track was stable.
6. The aircraft was uplifted suddenly at around 50 feet AGL; the crew slightly retarded the thrust to correct it.
7. From flight track rebuilding data, the wind direction 10 seconds before touchdown was contrary from what Chiayi Tower issued before landing.
8. The aircraft touched down at 769 meters from the threshold of Runway 36, 15 meters left side of the runway centerline, and with heading 355.4° (with an included angle of 6.6° with the runway).
9. The aircraft encountered sudden heavy rain at the landing phase and the pilot was unable to get a clear visual reference outside the window. However, since they were about to touch down, they decided to continue. When the visibility was regained, they were already rolling on the grass left side of the runway.
10. The aircraft veered off the runway twice and came to a full stop at 6000 feet from the runway threshold, no casualties and the aircraft suffered minor damage. The right wingtip of the aircraft was only 1.5 meters from the runway signs. The structure of the signs was hard and solid, which was not conformed to the fragile design of ICAO and Civil Aerodrome Design and

Operation Standards.

11. Since the power of the Cockpit Voice Recorder was not instantly cut off, the voice recording records were unable to be kept.
12. The circuit of the Flight Data Acquisition Unit (FDAU) was abnormal causing incorrect parameters of GMT and Localizer.

Findings related to the probable causes

Although the aircraft was interfered by unstable airflow during the instrument approach, the pilot could still stabilize the aircraft. Before landing sudden rain occurred and the pilot was unable to get a clear view outside the window, however, since the aircraft was about to touch down, they decided to land. Meanwhile they encountered a change of air flow leading to a change of the original track and the longitudinal axis of the fuselage, the pilot was unable to realize the above-mentioned phenomenon due to losing visual references, so he still kept the same control amount and continued landing, hence causing variation to the left due to excessive correction on the track when touched down, the longitudinal axis of the fuselage could not become parallel to the runway timely and therefore formed a 6.6° included angle with the runway. By the time they rushed out of the rain and regained visibility, the aircraft was already rolling on the grass left side of the runway.

Previous mentioned possible causes were derived from data, flight tracks from charts and aircraft attitude analysis. The Cockpit Voice Recorder records were lost due to the disposal process of the crew. Investigators were unable to research the operation situation inside the cockpit, including the instrument alarms, whether the

SOP was followed and the crew teamwork situation.

Safety Recommendations

To Ministry of Transportation and Communications (MOTC)

1. Evaluate the station facilities of Chiayi and all domestic Civil and Military Airports, including runway/taxiway obstacles and weather observation facilities, if not complied with international standards or Civil Aviation Act, coordinate with associated units to improve.

To Civil Aeronautics Administration, CAA

1. Add CVR power cut confirmation operating procedure during accidents for airport flight operation personnel.

To Far Eastern Air Transport

1. Deliberate the feasibility and maneuvering techniques of go-around when losing visual references below 50 feet according to the characteristics of aircraft types, and establish low level go-around standards and training manuals.
2. Add CVR power cut confirmation operating procedures during accidents.
3. Strengthen the confirmation of the accuracy of FDR parameters to comply with article 22 in "Fixed wing Aircraft ATMP".

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