

Shanghai, Lughwa Airport: The Air Disaster on Christmas Day 1946

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Shortly after the surrender of the Japanese armed forces in China in 1945 the China National Aviation Corporation re-established its headquarters at Lughwa Airfield, which then became the new Shanghai Airport. The much larger and better equipped Kiangwan Air Base was, from the summer of 1946, designated for military use only.

The China National Aviation Corporation (CNAC) used a number of former USAAF transport aircraft and manned them with American (some ex USAAF) and Chinese pilots and crews. The airfield was not well placed for the rapidly growing civilian air traffic. It was close to the busy Whangpoo River to the south whilst just to the north was the historic Lughwa Pagoda. The airfield was not equipped with radar assisted landing equipment although there was a mobile radar station near Kiangwan operated by the U.S.Navy with the code name "Shanghai Zippo". In 1946 the aircraft used by CNAC for both passenger and cargo flights were Douglas C47 (DC3) and Curtiss C46 (Commando) transports which had seen much use in transporting supplies over the "Hump" from India into China.^a The CNAC pilots were enthusiastic aviators with excellent war service records but some had limited experience in radar assisted landings in bad weather.

On the evening of Christmas day 1946 disaster struck. It was one of the most tragic nights in the history of civil aviation, and briefly reported at the time. Of four airliners headed for Shanghai three crashed in and around Shanghai, two at Lughwa Airport and one near Kiangwan killing nearly all the passengers and crews on board. It was a day that would never be forgotten by those closely involved.

The following has been compiled from my notes made at the time.

12.25.46. 0500 Zebra weather.

Ceiling: below 100 feet, 10 tenths overcast, fog, rain.

Visibility: 50 to 100 feet, wind direction variable, 0 to 5 knots.

Outlook: Slow moving NE Low 928, centred Hangchow.

No improvement expected over next 24 hours.

Lughwa operations closed from 1800 zebra 12.24.46

Operations Manager on call: Wood.

Operations Officer: Chen

CW Operator: L.T. Chang

Control Tower: 0000 - 0800 : R.Kliene, O.K.Watt

0800 - 1600 : E.Silva, H.Y.Hsu

1600 - 0000 : R.Manley, D.Pao.

The following account of events that day is a compilation of information gleaned from senior officers and air traffic operators on duty at the time.

The office of Flight Operations at Lughwa Airport had had very little to do all day. It had been raining persistently with low cloud and fog dominating the whole eastern seaboard, the estuary of the Yangtze River and its tributary, the Whangpoo, on which the city of Shanghai is situated. It was the evening of Christmas day with the restaurants, clubs, hotels and military establishments prepared for seasonal celebrations of pre-war dimensions. The persistent rain was preventing any outdoor events but the large influx of American servicemen to the city over the past year guaranteed a surfeit of parties and dances at military bases and clubs, as well as in the homes of the civilian population into which many of the Americans had been welcomed with great enthusiasm.

Captain W.C.McDonald, the CNAC Chief Pilot had agreed with the weather station at Kiangwan that the airport should be closed to all air traffic due to bad weather. One officer remained in charge at Lunghwa Operations whilst the remaining staff, except for a clerk and the CW (morse code) operator, returned to the city to join the Christmas celebrations. In the control Tower the shift Senior Control Tower Operator (Richard Manley) and his assistant were on duty but with little to do of any significance.

Lunghwa Airport control tower duties were divided into three shifts so as to cover the full twenty four hours operation. The day shift began each morning at 8 am and ended at 4 pm. The second shift covered the next eight hours till midnight followed by the least popular night shift. Senior Tower Operators were always present with at least one assistant in the tower. Every month the shifts were rotated. For December I had "drawn the short straw" and was due to go on duty at midnight. This, however, allowed me to attend the Christmas party my family was holding in our home. I knew that I would have to leave by about 11 pm in order to be in the tower early enough for the usual 15 to 20 minutes needed for briefing and hand-over. I was due to be picked up by the duty vehicle just before 11.00 that evening. However at about 8.30 pm I was called by the Operations Manager. He told me to be ready in half an hour as there had been an air crash. I would be needed to man the tower as soon as possible as the evening shift had to be relieved for accident debriefing and interrogation. CTO Watt and the crew vehicle arrived about 9 pm. He informed me that there had been more than one crash and that many people were dead.

It was normal for Flight Operations at Lunghwa to record all aircraft movements throughout China. Nanking, Chungking, Hangchow, Wuchang(Hankow), Peishili and Tsingtao were on CNAC routes. There were also flights by the competitive airline Central Air Transport Corporation (CATC) which had recently joined the growing commercial airline network. It too employed former air force pilots and crews. The flight plans of all flights including military aircraft were recorded at both Lunghwa and Kiangwan with minute by minute radio co-ordination and confirmation. The local station could hear most voice transmissions up to about 100 miles beyond which it was usual to make contact by 'morse' until the aircraft was handed over to Approach Control.

At 11 a.m. on the morning of the 25th of December the rain was still falling steadily and the visibility was officially recorded as zero/zero. In other words virtually no visibility at zero altitude and distance. The first radio transmission received that day was for an aircraft some distance away headed for another station. It was acknowledged and Flight Operations informed. The recorded message read:

"Radio to Operations, Seenac 121 arrived Peishili at 15.04 Zebra.^b

A second message, followed within minutes. This was:

"Radio to Operations, Seenac 140 departed Wuchang for Nanking at 15.02 Zebra".

The duty officer, convinced that the last weather report from Nanking had stated its visibility as zero/zero, contacted the local weather station. They confirmed that Nanking had reported visibility just above the minimum and improving. The cloud base was over 1000 feet as a result of which the airport had been declared open. But IFR^c approach would be essential due to the narrow corridor between the hills to the south and Purple Mountain to the north-east with its peak at about 1500 feet.

Within the next 15 minutes there were two further reports of departures for Nanking. CNAC 115 and CA 48 were now enroute from Peishili and Hankow

An hour later 'Weather' confirmed a general deterioration of visibility in the region of Nanking with the cloud base lowering again to 300 feet. Shanghai Control was informed that Nanking would have to close down and re-route the incoming aircraft to other airfields. Whilst the weather at Wuchang was acceptable for normal operations the small airfield was not equipped with runway lights and in the winter closed daily at four o'clock in the afternoon. Tsingtao, in the far north was beyond the remaining fuel capacity of both aircraft and also suffered from the lack of night landing facilities.

Meanwhile CNAC 140 had made three unsuccessful attempts to land at Nanking. Apparently the Captains of CNAC 115 and 140 then discussed their position with Nanking Operations and it was agreed that they should divert to Shanghai. CNAC 140 enroute from Nanking was given the choice of returning to Wuchang for a hazardous night landing or to proceed to Lunghwa. With little fuel to spare he chose the slightly longer distance to Lunghwa.

The beacons at Lunghwa for all runways were in operation and should, normally, have been a sufficient safeguard for incoming aircraft to locate the airfield, approach the active runway, and begin their descent, but in this weather the light beam of the beacon would have been virtually invisible. Lunghwa at least had this approach and landing equipment installed and the terrain for more than 50 miles around the airport was reasonably flat and free of obstacles with the exception of the Lunghwa pagoda and one or two factory chimneys. For McDonald, diverting the aircraft to Shanghai seemed the best solution available at the time. He agreed with the Operations Manager to allow the aircraft to proceed to Lunghwa.

The first warning of the enormity of what was to follow was a call from Kiangwan airbase that a CATC flight had made several attempts to land there in preference to Lunghwa but that all attempts had failed despite the best efforts of their radar assisted landing procedure. At about 17.00 another call reported in stark tones that CA 48 had crashed.

The Duty Officer, a former Air Transport Command pilot knew, by simply looking out of the window of the operations building, that the conditions the incoming pilots were to encounter would require great skill and a good deal of luck. The fog was thicker than ever and Lunghwa did not have the facilities available at Kiangwan. He could not see his jeep parked just 50 yards away. He personally knew the three flight captains who were Jim Greenwood on CNAC 140, Rolf Preus and Joe Michiels on 115 and 147. Two days earlier Greenwood had excitedly told him that his wife and children were arriving in Shanghai from the States in two days time to spend Christmas with him. A decision was made to divert the planes to Kiangwan.

The control tower realised that all the planes would be approaching the airfield at about the same time. Altitude separation would be critical and 'stacking' over the outer beacon essential. The first call to the tower came from CNAC 140. He was at 3000 feet, estimating his arrival over the 'homer' beacon in twenty minutes. However his radio voice transmission was weak and breaking up. The tower transferred his frequency to the "command set" transmitter on 44.95 kcs with good results. Contact was now made with CNAC 147. Captain Michiels requested direct contact with Shanghai Zippo for a GCA radar assisted approach. The radar "landing assist" station was functioning. (Apparently McDonald had requested their help and the Navy had responded by standing by after the crash of CA48). A call was made to CNAC 140 to contact "Shanghai Zippo" on VHF 380 for a landing with radar assistance at Kiangwan.

Captain Greenwood made the call: "Shanghai Zippo, Shanghai Zippo this is Seenac 140, do you read." He twice repeated this message but received no reply. Lunghwa control advised CNAC 140 to change to the command frequency in the hope that Shanghai Zippo might pick up their call. This was not the case. They were receiving only on VHF but CNAC 140 was transmitting very feebly on this wavelength. At this juncture Lunghwa Tower was called by CNAC 115 estimating its arrival over the beacon in 15 minutes. Having advised 115 to hold at 4000 feet the tower turned its attention back to CNAC 140 who confirmed that contact with Shanghai Zippo had not been established. The attempt to land there was abandoned and Greenwood went on to say that he was very low on fuel and must attempt a landing at Lunghwa without further delay. Direct approach was granted and within five minutes he was over the inner beacon, only one minute flying time from the threshold of the runway, and descending. His radio transmissions were now intermittent and unclear. Seconds later he called again to say that he had strayed off the runway direction and would have to realign the aircraft. In the tower his engines could be clearly heard but his flashing navigation lights were invisible nor had anyone seen his forward landing lights. The tower later stated that from the sound of his engines it seemed that he had crossed the field on a bearing 90° off the direction that he needed if he was to land on the main operational runway. That would not have mattered as in the low wind speed conditions any runway would do. With his fuel running out and in the prevailing still air conditions he was cleared to land on any of the runways with which he could line up most easily.

CNAC 115 now called in to report passing the 'homer' beacon at 4000 feet and requested permission to make an immediate descent to 2000 feet. The tower advised that they were not sure of CNAC 140's altitude and to descend only to 3000 feet until it could be confirmed. CNAC 140 heard this call and responded. In a transmission heavy with static the co-pilot reported they were below 1000 feet and turning south of the field. CNAC 147 confirmed he was in contact with Shanghai Zippo and was at 2000 feet over Kiangwan. Seconds later Greenwood's voice was heard saying that he had lost one engine. Captain McDonald stepped out onto the outer balcony of the tower in case the aircraft could be seen. He was joined there by the Operations Manager who had arrived with several other CNAC officers.

The spluttering of an engine was heard, then an eerie silence for a few seconds. The impact when it came exploded from the wet darkness with mind shattering force. It seemed to expand radially from a point directly in front of the control tower. The orange flash of the remaining fuel was diffused and contained in the thick moisture ridden fog. It travelled from east to west roughly in the right direction of Runway 28. Later it was found that CNAC 140 had struck the ground near the intersection of the two runways and careened down Runway 28 for over 1000 yards before leaving the tarmac and somersaulting into the mud at the west end of the airfield leaving a trail of debris and broken aircraft parts. Captain Greenwood had aligned his aircraft correctly but, out of fuel, had stalled too close to the ground.

The sirens of the firefighting crew were heard but there was no time to contemplate in too much depth what had just happened. It was now abundantly clear that the other approaching aircraft was in extreme danger. CNAC 115 was calling to say that he was descending on a "long final". The crew of CNAC 115 would have heard the last transmissions of CNAC140. Captain Preus had had the longest flight from his departure point and immediately reported that he was low on fuel, estimating his remaining flying time as around 30 minutes. He was cleared for immediate descent for Runway 2. Almost immediately Preus called to say that he was not happy with his approach and would "go around again". The sound of his engines were quite loud and his forward landing light beams were seen for an instant as he passed the tower not much more than 50 feet from the ground. The minutes that passed felt like an eternity. Captain McDonald standing just outside the tower heard a booming sound to the south. The tower called CNAC 115 but received no response. McDonald and his companions ran down the steep steps from the tower to the operations room below and out onto the tarmac where they boarded a jeep and drove off to the southern end of the field. The unrelenting rain continued.

The numbing silence in the tower was broken by the sound of Captain Michiels' voice.
 "Lunghwa Tower this is Seenac 147. Landed Kiangwan 19.04 Over and out."

It was only the following day that a full picture of the calamitous events became clear. Captain Wing in CA 48 had banked to the left after his failed landing at Kiangwan and struck the roof of a building in a nearby village. It had cartwheeled into a number of houses just beyond the airport perimeter. CNAC 115 was apparently making a well directed approach to Runway 2 but below the expected glide path. His undercarriage struck the roof of a school building which had caused him to plunge into the ground at least a mile short of the runway. Somehow he had been able to lift the nose of the aircraft just before impact and the plane had slithered for about a hundred yards into a number of trees.

Casualties

CNAC 140 - Captain James Greenwood, Co-pilot L.Lin, Radioman King and 27 passengers died.

Of 10 passengers found alive by the rescuers seven died later at the hospital, or on the way to the hospital.

CA 48 - Captain Tommy Wing (ex CNAC), his entire crew and 10 passengers were killed. Three inhabitants of the house struck by the aircraft also died.

CNAC 115 - Co-pilot H.C.Tan (ex Chinese Air Force) and 20 passengers were killed. Captain Rolf B.Preus and his radioman survived although severely injured. It is not recorded if they survived. 6 passengers also survived.

Total casualties on the night were:-

74 killed or died of their injuries. 8 others injured.

One of the passengers killed was Control Tower Operator T.C.Weï, on board CNAC 115 for training

In addition:-

Three occupants of a house to the north of Kiangwan Air Base were killed.

Two members of an ambulance crew were injured when the vehicle ran off the road in the fog.

Notes:

- a Supply runs over the 15,000 ft. Himalayas from India into Kunming and Chungking. By the end of the war over 650,000 tons of supplies had been airlifted into China by this route using C47 and C46 aircraft.
- b "Zebra" time indicated local time, as opposed to GMT (Greenwich Mean Time)
- c IFR = Instrument Flight Rules

THIS ACCOUNT DOES NOT SEEK TO APPORTION BLAME OR OFFER ANY EXPLANATIONS.
IT IS SIMPLY A RECORD OF EVENTS AS REMEMBERED AND NOTED AT THE TIME BY THE AUTHER.

R.I.Kliene
Pavenham, England - December 1999