

Aircraft Accident Investigation Bureau of Myanmar

The aircraft accident investigation bureau (AAIB) is the aircraft investigation authority in Myanmar responsible to the Ministry of Transport and Communications. Its mission is to promote aviation safety through the conduct of independent and objective investigations into air accident and incidents.

For aviation related investigations, the AAIB conducts the investigations in accordance with Myanmar Aircraft Act and Rules and Annex-13 to the Convention on International Civil Aviation.

In carrying out the investigations, the AAIB adheres to ICAO's stated objective, which is as follows:

"The sole objective of the investigation of an accident or incident shall be the prevention of accidents and incidents. It is not the purpose of this activity to apportion blame or liability."

Accordingly, it is inappropriate that AAIB reports should not be used to assign fault or blame or determine liability, since neither the investigation nor the reporting process has been undertaken for that purpose.

**FINAL REPORT OF LOSS OF SEPARATION BETWEEN AIRBUS 320,
REGISTRATION HS-TXB AND ATR 72-600, REGISTRATION XY-AJP ON 18
DECEMBER, 2017**

SYNOPSIS

At 08:23:39 (UTC) on 18 December 2017, a Airbus 320 (HS-TXB) lined up and waited on Runway-21 of Yangon International airport for take off. At 08:24:47(UTC) an ATR 72-600 (XY-AJP) was established on ILS of Runway-21. The duty air traffic controller instructed ATR-72-600 to report when it was 4 DME away from the touch down of the Runway-21. AT 08:25:35(UTC) the Airbus 320 (HS-TXB) reported, "Thai Smile 302, standby for takeoff clearance." The duty controller replied, "Thai Smile 302, behind landing aircraft on final, line up and wait behind." Thai Smile 302 replied, "We already line up runway-21, Thai smile 320." At that time another controller stepped in and gave takeoff clearance to the ATR-72-600.

It was assumed that at the closest point, the two aircraft were separated longitudinally by 1.2 nautical miles (nm) and vertically by 50 ft.

The Aircraft Accident Investigation Bureau of Myanmar was informed of the incident on 29 December, 2017. There was no injuries in the incident.

1. Aircraft Details

1.1 Thai Smile Airlines

Registered owner and operator	:	Thai Smile Airlines
Aircraft type	:	Airbus 320
Nationality	:	Thailand
Registration	:	HS-TXB
Place of Occurrence	:	Yangon International Airport
Date& Time	:	18 December 2017 (0826 UTC)
Type of operation	:	Scheduled Passenger International Flight
Phase of operation	:	Line up on Runway 21
Persons on Board	:	Crew - 6, Passengers- 51

1.2 Mann Yadanarpone Airlines

Registered owner and operator	:	Mann Yadanarpone Airlines
Aircraft type	:	ATR72-600
Nationality	:	Myanmar
Registration	:	XY-AJP
Place of Occurrence	:	Yangon International Airport
Date& Time	:	18 December 2017 (0826 UTC)
Type of operation	:	Scheduled Passenger Domestic Flight
Phase of operation	:	Landing phase
Persons on Board	:	Crew - 4, Passengers- 71

1.3 Personnel Information

1.3.1 Pilot in Command (Mann Yadanarpon Airline)

Age	:	41
Licence	:	ATPL
Licence issued date	:	26 December 2011
Total hours	:	3807:37
On type	:	3807:37

Medical expire	:	30 June2018
Line check date	:	19 August 2017
Type rating check date	:	8 January 2014
Last 90 days	:	28600
Last 30 days	:	86:49
Last 24 hours	:	6:37

1.3.2 Co-Pilot (Mann Yadanarpon Airline)

Age : 47

Licence : ATPL

Licence issued date : 22 December 2017

Total hours : 3279:00

On type : 3279:00

Medical expire : 31st March 2018

Line Check date : 11 February 2015

Type rating check date : 20 December 2014

Last 90 days : 206:08

Last 30 days : 83:33

Last 24 hours : 9:35

1.3.3 Pilot in Command (Thai Smile Airline)

Age	:	42
Licence	:	D-2303
Licence issued date	:	22-05-2013
Total hours	:	1504:29
Medical expire	:	27-12-2017
Line check date	:	27-12-2017
Type rating check date	:	30-03-2016
Last 90 days	:	242:01
Last 30 days	:	124:25
Last 24 hours	:	0

1.3.4 Co-Pilot (Thai Smile Airlines)

Age : 30

Licence : B-4636

Licence issued date : 12-06-2014

Total hours : 1102:02

Medical expire : 29-05-2018

Line Check date : 11-01-2018

Type rating check date : 24-11-2016

Last 90 days : 226:58

Last 30 days : 129:38

Last 24 hours : 0

2. ANALYSIS

2.1 Introduction

The analysis by the investigation team has focused on the following areas:

- a) Witness statements
- b) ATC Radio Communications
- c) Radar Play Back
- d) Related SOP of Air Traffic Service

2.1.1 Air Traffic Controller

The duty air traffic controller was a trainee controller. She joined the Air Traffic Department on 18 September 2017. On the day of the incident, she was on tower position and office hours were from 7am to 7pm. Her duty hours were from 1pm to 2pm backed up by a senior air traffic controller.

During the interview, she stated that the weather was clear, the traffic at that time was light. She did not feel tired and was not on any medication. At the time of incident, she was controlling two aircraft, one was on ground and the other was on approach.

She stated that she gave the line-up clearance to the Airbus 320 (HS-TXB) on runway-21. She forgot it. When the Airbus 320(HS-TXB) replied that it was on the runway and lined up waited for takeoff clearance, she did not know what to do. At that moment the watch air traffic controller was not together with her. An approach air traffic controller stepped in and gave takeoff clearance to the A320 (HS-TXB) to solve the conflict.

2.1.2 Watch Air Traffic Controller

The watch air traffic controller was the senior one and joined the Air Traffic Department on 17 October, 2011. She resumed her duty as an air traffic control after she had taken six months maternity leave. Before she performed her duty, she received the familiarization briefing from the tower-in-charge regarding traffic situation and airport layout and parking bays.

She stated that at the time of incident, the traffic was light; the weather was fine; there was one outbound aircraft and the other was an inbound aircraft on approach 7DME to touch down. Just before that time she went to the coffee bar to make coffee. She did not hear the conversation between the trainee controller and pilots because the trainee controller was using a head set.

2.1.3 Approach Air Traffic Controller

At about the time of incident an approach air traffic controller was a trainee controller as well, backed up the tower controller-in-charge. He joined the Air Traffic Department on 12 December 2017. The tower controller and the approach controller were sitting side by side. He stated that he stepped in and gave takeoff clearance to the A320 (HS-TXB) to solve the conflict because he saw that the A320 (HS-TXB) was lined up on the runway 21 and another aircraft was on short final. He instructed ATR 72-600(XY-AJP) to continue approach.

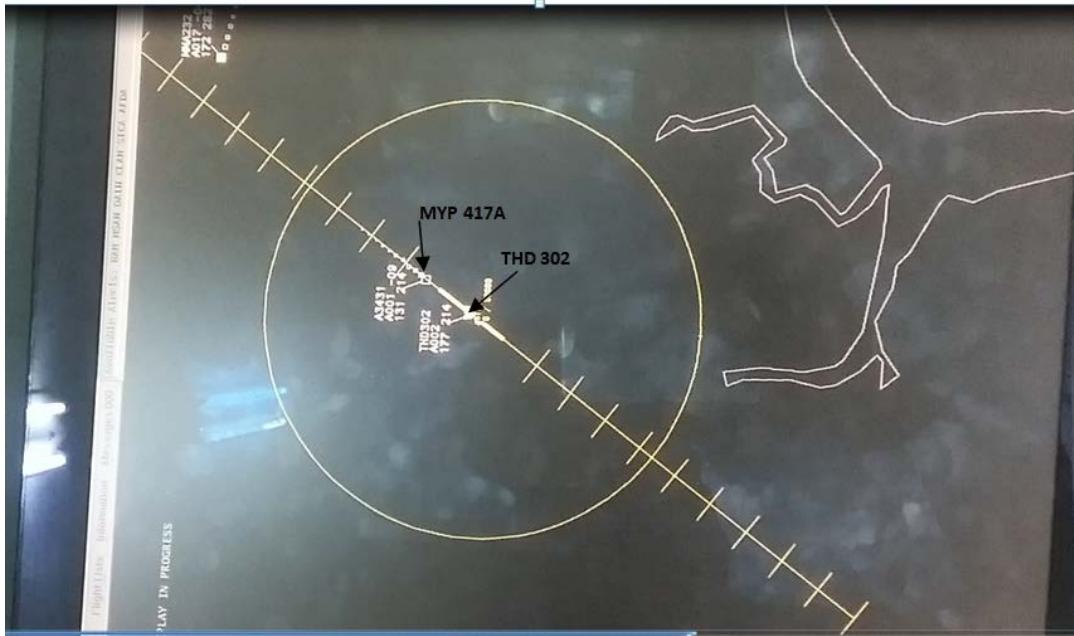
2.1.4 Tower Controller-in-Charge

He joined the Air Traffic Department in 2001 and has been working as a tower controller-in-charge for six years. He stated that working hours were from 7am to 7 pm on that day and around the time of incident, the traffic was light. The weather was fine. New controllers were being trained during light traffic hours backed up by a senior controller.

2.1.5 ATC Radio Communications

In the radio communications between the duty controller and copilot of the Airbus 320(HS-TXB), at 08:23:44(UTC) the duty controller said, "Thai 302, line up and wait." At 08:23:46(UTC) the copilot read back, "Line up and wait runway-21, Thai 302." At 08:25:35(UTC), the copilot called, "Tower, Thai 302 Standby for takeoff clearance." At 08:25:42(UTC), the duty controller replied, "Thai 302, behind landing aircraft on short final, line up and wait behind." The duty controller forgot the clearance that she gave to the Airbus 320(HS-TXB). At 08:25:44(UTC), the copilot replied, "we already line up and wait runway-21, Thai 302." At 08:25:53(UTC), the copilot repeated, "Thai 302, we are on runway." At 08:26:02(UTC) the copilot called the tower again, "Tower Thai 302." Although the copilot called the tower two times, the duty controller did not replied at that moment. At 08:26:16(UTC), another controller stepped in and gave clearance, "Mann Royal 417 continue approach, break break Thai 302 wind calm runway-21, clear for take off."

2.1.5 Radar Play Back



From the radar play-back, it was confirmed that another landing aircraft (MYP 417A) had crossed the runway threshold on its final approach before the preceding departing aircraft (THD 302) was clear of the runway-in-use. That was contrary to the **control of arriving aircraft** as per Clause 7.10 of ICAO Doc 4444 as well as **control of arriving aircraft** as per Manual of Air Traffic Service of Myanmar.

2.1.6 The Aircraft Accident Investigation Committee of Thailand (AAIC) comments

"MAIB should include the factual information regarding:

1. the communication between (XY-AJP) aircraft and Air Traffic Controllers;
2. the related Standard Operation Procedure (SOP) of Mann Yadanarpone Airline;
3. the (XY-AJP) Pilots' awareness of the situation and their related actions; and
4. the related SOP of Air Traffic Service.

Additionally, MAIB should also analyse such additional information, conclude, and issue related safety recommendations."

2.1.7 (XY-AJP) Pilots' awareness and their action

The pilots from (XY-AJP) were not aware of and didn't inform this incident to Aircraft Accident Investigation Bureau of Myanmar.

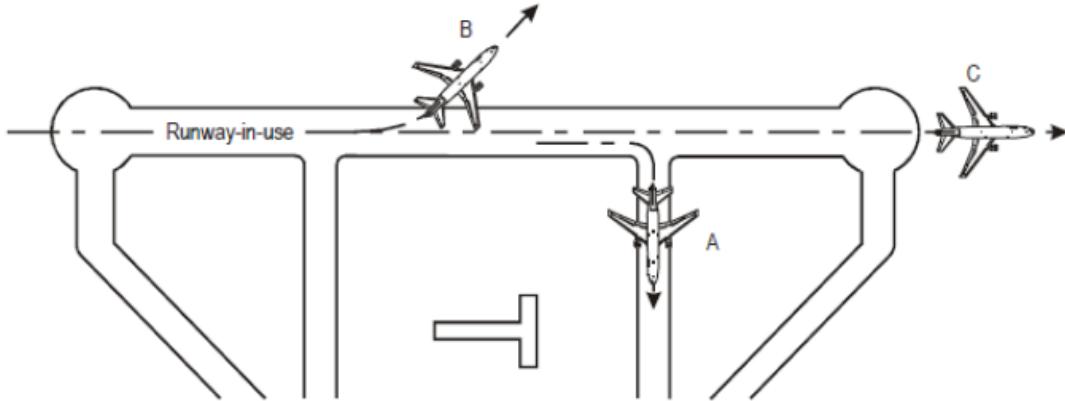
2.1.8 Related SOP of Air Traffic Service

2.1.8.1 Control of Arriving Aircraft

Separation of landing aircraft and preceding landing and departing aircraft using the same runway

A landing aircraft will not normally be permitted to cross the runway threshold on its final approach until the preceding departing aircraft has crossed the end of the runway-in-use, or has started a turn, or until all preceding landing aircraft are clear of the runway-in-use.

Position limits to be reached by a landed aircraft (A) or a departing aircraft (B or C) before an arriving aircraft may be cleared to cross the threshold of the runway-in-use or a departing aircraft may be cleared to take off, unless otherwise prescribed by the appropriate ATS authority in accordance with 7.9.2 and 7.10.1.



2.1.8.2 Runway Incursion or Obstructed Runway

In the event the aerodrome controller observes, after a take-off clearance or a landing clearance has been issued, any obstruction on the runway likely to impair the safety of an aircraft taking off or landing, such as a runway incursion by an aircraft or vehicle, or animals or flocks of birds on the runway, appropriate action shall be taken as follows:

- cancel the take-off clearance for a departing aircraft;
- instruct a landing aircraft to execute a go-around or missed approach;
- in all cases inform the aircraft of the runway incursion or obstruction and its location in relation to the runway.

Note.- Animals and flocks of birds may constitute an obstruction with regard to runway operations. In addition, an aborted take-off or a go-around executed after touchdown may expose the aeroplane to the risk of overrunning the runway. Moreover, a low altitude missed approach may expose the aeroplane to the risk of a tail strike. Pilots may, therefore, have to exercise their judgement in accordance with Annex 2, 2.4, concerning the authority of the pilot-in-command of an aircraft.

Following any occurrence involving an obstruction on the runway or a runway incursion, pilots and controllers shall complete an air traffic incident report in accordance with the ICAO model air traffic incident report form.

3. CONCLUSIONS

3.1 Findings

From the evidence available, the following findings are made. These findings should not be read as apportioning blame or liability to any particular organization or individual:

- a) The breakdown in separation between the A320 (HS-TXB) and the ATR 72-600(XY- AJP) was the result of the instruction given by the tower controller to the A320 (HS-TXB) "behind landing aircraft on final, line up and wait" when the A320 (HS-TXB) had already lined up and waited on runway-21 of the Yangon International Airport.
- b) ATC did not inform Aircraft Accident Investigation Bureau of Myanmar of the incident.

4. SAFETY RECOMMENDATIONS

To reduce and eliminate of accidents and incidents, AAIB recommended the followings:

- 4.1 The trainee controller should be given the training course on Control of Arriving Aircraft as per ICAO Doc 4444.
- 4.2 The watch controller should be with the trainee controller on duty all the time.

5. SAFETY ACTIONS

In the course of the investigation and arising from discussion with the investigation team, the air traffic department has taken the following safety actions.

- 5.1 The training course on Aerodrome control such as airspace, responsibilities, alerting of the rescue and fire fighting services, standard phraseologies, runway incursion or obstructed runway was given to the trainee controller, the watch controller and the tower controller-in-charge.

5.2 The training course on Control of Aerodrome (Traffic/Traffic Circuit) such as traffic on the maneuvering area, control of departing /arriving aircraft and Aerodrome Separation Standards was given to the trainee controller, the watch controller and the tower controller-in-charge.

5.3 The training course on Safety Management System such as ATS Safety Occurrence Reporting System (ATMD SMS manual Appendix B) and overview of Doc 9859 was given to the trainee controller, the watch controller and the tower controller-in-charge.

A handwritten blue signature, likely 'John', is written over a blue line.

Investigator -in -charge