

VC POLICY

RUNWAY INCURSION

INTRODUCTION

Unintended incursion into the safety area surrounding an active runway is one of the major sources of accidents and incidents worldwide with potentially devastating results. In 1977 a well-known runway incursion in Tenerife resulting in 583 deaths.

To prevent runway incursions VC demands:

1. Airport layout and marking

A key point in preventing runway incursions is a smart design of the airport itself. Complicated taxi clearances, poor visibility or problems in the passenger cabin might shift the focus of flight crews away from taxiing. Therefore, clearly visible warnings shall be installed at all runways. Furthermore, taxiing on runways should be avoided whenever possible.

VC recommends the following elements:

→ Runway Markings

In any case a runway should be clearly indicated as such. Therefore, well visible holding position markings, including the required lighting, especially at night or in low visibility, are essential. VC demands alternately flashing „Runway Guard Lights“ and controller operated red „Stopbars“.

Furthermore, for a safe line-up onto the correct runway it is important that the corresponding taxiways are clearly marked with simple markings.

Taxiways for the sole purpose of leaving a runway shall be marked with a „no entry“ sign from the opposite side.

→ Parallel Taxiways

Taxiways should be designed in a way that aircraft can enter and leave the runway at both ends.

Taking off, landing, taxiing and turning on an active runway by more than one aircraft or airport vehicles at the same time is an enormous safety risk and is therefore rejected by Vereinigung Cockpit.

2. Air Traffic Control (ATC) - Procedures

ATC plays a crucial role in preventing runway incursion by designing procedures for aircraft movement on the ground and in the air and ensuring its implementation. When necessary ATC may use appropriate procedures to enhance safety all the while decreasing overall aircraft movements.

The following procedures have been identified as risky by Vereinigung Cockpit:

→ „Land and Hold Short Operation (LAHSO)“

Vereinigung Cockpit rejects the „Land and Hold Short Operation (LAHSO)“. This method allows two aircraft to simultaneously operate on two crossing runways. According to this procedure an aircraft is cleared to land on a runway but to hold short of a crossing runway while another aircraft uses that runway for a takeoff. This causes an unnecessarily high risk of a collision.

→ „Sequential Landing Clearances“ at low visibility

This procedure enables several consecutive approaching aircraft to receive a landing clearance even before the preceding aircraft has landed. However, at poor visibility it is impossible for the succeeding aircraft to assess whether the preceding aircraft has already vacated the runway. This procedure should only be used when all participants have visual contact to all preceding aircraft.

➔ „Intersection Take-Offs“ with impaired sight and during poor visibility

For the same reason as in „Sequential Landing Clearances“ Vereinigung Cockpit rejects take-off clearances from a location down the runway, when there is no visual contact between the participants. Otherwise, aircraft at the beginning of the runway will not be able to determine whether the preceding traffic has already lifted off.

➔ „Runway crossing“

The crossing of an active runway should be avoided. Here lies a great danger of a collision between a fast aircraft on take-off or landing roll with an aircraft crossing the runway. If for operational reasons a crossing is unavoidable individual measures should be established to minimize the risk. This can be achieved by technical solutions or operating procedures.

If at all “runway crossings” should only take place at the beginning or end of runway (low energy part). Furthermore all aircraft and vehicles in the vicinity of an active runway should use a single tower frequency.

➔ „Frequencies “

Vereinigung Cockpit demands at least two separate frequencies on aerodromes. The tower frequency shall be reserved for safety critical clearances and instructions. All aircraft and vehicles in the vicinity of an active runway should be on this tower frequency. Taxi- and enroute clearances should be given via a separate ground or delivery frequency.

3. Taxi procedures

The taxiing of aircraft is regarded as safety-critical. The main risk aside from colliding with other vehicles or aircraft is the unintentional incursion of an active runway.

Therefore, flight crews shall not be distracted.

Procedures regarding taxiing should be published in the operator's manuals accordingly.

Taxi procedures should at a minimum include the following:

1. Application of the Sterile Cockpit Concept
2. Sticking to standard radio telephony phraseology
3. Use of headsets with „boom-mics“ by flight crews
4. Maximum taxi speed acc. OM-B, however not more than 30 kts.

Furthermore, all necessary tasks, briefings and checklist, shall be carried out prior to taxiing.

Also see “Runway Incursion Prevention Program” by IFALPA, especially „09AGEBL01“, Mai 2008

4. Pilots assistance systems

Systems assisting flight crews to enhance their situational awareness shall be provided by the operator and used by the flight crews following adequate training. Procedures on how to use them shall also be published in the operator's manual. Examples for such systems are „Runway Awareness and Advisory System“ and "Airport Moving Map Display“ with the own aircraft being indicated on that map.