Airside Safety: Apron Safety, Runway Incursions and Excursions

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2. Access to airside

CAR: Part 139.01.14,15 & 139.02.28 (as amended)

- Procedure for access control to be developed by aerodrome operator
- Identity cards/permit system
- Cards/Permits to be worn visibly
3. Personnel Training
Part 139.02.5

- Familiarisation
- Induction
- Competency
Airside Safety Management
CAR: Part 140

- Accident and Incident Reporting System
- Safety Occurrence Investigation
- Ensure proper Risk Management
- Safety Audits
Airside Safety Occurrences

- Apron Equipment & Aircraft
- Apron Equipment & Apron Equipment
- Apron Equipment & Facility/Property
- Apron Equipment & Vehicle
- Vehicle & Vehicle
- Vehicle & Facility/Property
- Vehicle & Aircraft
- Aircraft & Facility/Property
- Aircraft & Aircraft
- Bird Strikes
- FOD (Foreign Object Damage)
- Fuel Spills
- Runway Incursions
4. Works on aerodrome

CAR: Part 139.02.23 (as amended)

- Aerodrome operator to develop and maintain procedure to ensure that works carried out on aerodrome do not endanger aircraft operations.
- Inform the Director of any alterations, obstructions or works.
- Hot works – notify ARFFS.
- Cordonning off of construction site.
- Control of construction vehicles and personnel etc.
Use proper isolation barriers
6. Airside Vehicle Control Procedure
CAR: Part 139.01.13, 16 & 26 (as amended)

- Procedure to be developed by the Aerodrome operator to regulate vehicular movement on apron.
- Airside driver training.
- Vehicle/equipment serviceability.
7. Parking and Securing of Aircraft on Apron
(CAR: Part 139.01.20 as amended)

- Ensure that the aircraft is properly chocked, moored or tied down by the operator of the aircraft.
Use proper chocks
Ensure provision for tie-down facility for small aircraft
Strong winds
8. Runway Incursions

Definition:

“Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.”
Overview

Violations:

1. Pilots –
   - Crossing without ATC clearance
   - Taking off without clearance
   - Landing without clearance

2. Operational Incidents –
   - Clearance given to aircraft onto runway while another aircraft is landing on the same runway
   - Clearance given for take-off while the runway is occupied.
Overview (continued)

3. Vehicles –

- Entering or crossing runway without clearance from ATC
Contributing Factors

- Breakdown in Communication.
- Failure to follow clearance/instruction.
- Following an incorrect clearance/instruction.
- Failure to follow procedures for low visibility.
- Loss of situational awareness by pilots.
- Lack or inadequate access control to maneuvering area.
- Unfamiliarity of the airport.
- Use of inadequate procedures.
Contributing Factors (continued)

- Inadequate aerodrome signage & markings.
- Inadequate control of vehicular movement.
- Inadequate procedures during construction.
- Procedures for NOTAM issue not followed.
- Confusing aerodrome & taxiway layout.
- Inadequate barrier to deter unauthorised persons or animals (fence).
- Pilots failing to adhere to unmanned airfield procedures.
Prevention

- Use of proper aviation language proficiency for aircraft and vehicle operating on the maneuvering area.
- Proper knowledge of airport layout.
- Establishment of a common radio frequency where possible.
- Knowledge of the standard airport markings, signs and lighting.
- Introduction of Surface Movement Guidance Control Systems (SMGCS) where applicable.
- Establishment of Risk Management System.
ACTIVE RUNWAY AHEAD
LOOK RIGHT & LEFT FOR AIRCRAFT
Runway Incursion stats

Year | Runway Incursions
---|---
2008 | 8
2009 | 10
2010 | 26
2011 | 4
2012 | 3
2013 | 20
2014 | 18
2015 | 24
Runway Incursions 2015

- January: 4
- February: 2
- March: 3
- April: 1
- May: 2
- June: 2
- July: 1
- August: 2
- September: 2
- October: 2
- November: 1
- December: 0

RWY INCURSIONS 2015

SOUTH AFRICAN CIVIL AVIATION AUTHORITY
9. Runway Excursions

Definition:

- A veer-off or overrun off the runway surface during take-off or landing.
Contributing factors

- Runway not constructed and maintained to maximise effective friction and drainage.
- Late or inaccurate runway condition report.
- Not closing a runway when conditions dictate.
- Incorrect or obscured runway markings.
- Inappropriate obstacle assessment.
Runway overrun
Wet runway conditions
Prevention

- Define criteria to determine when to close a runway to prevent excursion.
- Ensure that runways are constructed and maintained to ICAO specifications, so that effective friction levels and drainage are achieved.
- Ensure that maneuvering area, including runways, conform to ICAO Annex 14 specifications.
- Risk Management.
Recommendations

- Operators to establish adequate Runway End Safety Areas (RESA).
Questions