

AERODROMES AND GROUND AIDS

Procedures for Apron Management

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1.0 PURPOSE

The purpose of this Advisory Circular (AC) is to provide guidance to the aerodrome operators in adopting operational procedures and principles for apron management. The aerodrome operators shall use these procedures, in order to:

- a) Ensure safe movement with the objective of preventing collisions between aircraft, and between aircraft and obstacles;
- b) Ensure safe entry of aircraft into, and coordinate exit of aircraft from, the apron with the aerodrome control tower; and
- c) Ensure safe and expeditious movement of vehicles and appropriate regulation of other activities.

2.0 REFERENCES.

- 2.1 Civil Aviation (Aerodrome Design and Operations) Regulations, 2024
- 2.2 ICAO Doc 9981 PANS Aerodromes
- 2.3 ICAO Doc 9137 Part 8 Airport services Manual Guidance on Apron Management Services
- 2.4 ICAO Doc 9476 Manual of Surface Movement Guidance and Control System

3.0 GENERAL

The apron is the area of highest intensity and variety of movements. It is the one place where aircraft, vehicles, passengers, airport employees and sometimes, casual visitors - and that actual incidences or accident are minimized, the aerodrome operator shall have measures which:

- i. Ensure each service provider on the apron have the safety procedures for the operation service rendered on the apron.
- ii. Ensure that all employees working on the apron are indoctrinated in the principles and practices of safety and tested on that knowledge before working on the apron.

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- iii. Have in place a programme of periodically reviewing and checking:
- iv. Accuracy of safety record and data on the apron.
- v. The validity of the safety procedures.
- vi. Safety awareness and practices of each employee working on the apron.
- vii. For safety management purpose operator of aerodrome shall make available the surface marking and signage to communicate safety information that abide passengers, drivers of vehicles and equipments and airport staff on the apron.
- viii. Ensure that access to the aprons by personnel and vehicles are limited to only those that have been specifically and individually cleared to work on the apron.
- ix. Ensure that each person working on the apron reports incidence or accidents of unsafe practice that has been observed.
- x. Ensures any personnel, who had been approved to work at certain portions of the maneuvering area, do not stray outside the demarcated approved area of works and that Permission are obtained from Air Traffic Controller if personnel are required to go beyond the approved boundaries;
- xi. Ensures any airside organization which requires outside personnel or contractors to their premises abides to the terms and conditions associated with the issue of airport pass and the general rules applicable to pedestrians and workers in the airside and that they adhere strictly to the rules and procedures governing the airside:
- xii. Ensure any organization contracted to work on the airside area submit Safety Management Plan that shall be in force for the whole period of contract. As a minimum the safety plan shall include the following:
 - 1. Training on safety in relation to:
 - a) Hazards to himself/herself and others emanating from his/her occupation.
 - b) Hazards to equipments, other employees and third parties, structures and installations.
 - 2. Issue and enforce the wearing of approved safety protective equipment.

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- 3. Make provision or procedures for handling of accidents and injury to its personnel.
- 4. Provide the name and other details of the person designated as the Safety Officer for the firm.
- 5. Plan for giving its staff refresher course on safety at least once every 6 months.

4. CO-ORDINATION WITH AIR TRAFFIC SERVICES

- a) The transfer points of responsibility between TWR and Apron Management are at the holding points of the taxiways.
- b) For arriving aircraft, the TWR controller shall release the aircraft to apron control after it crosses the points indicated in (a) above. However, he may release the aircraft earlier once the pilot reports that he has the marshaller in sight.
- c) For departing aircraft the marshaller shall release the aircraft to TWR before it crosses the transfer points in (a) above. However, he may release the aircraft earlier once it is definitely heading to the taxiway and is clear of all obstacles.
- d) TWR or the Briefing Unit shall inform Apron Management the ETA of each arriving aircraft and, if not otherwise indicated, the apron of its destination. TWR shall advise the Apron Control the landing of each aircraft as soon as it touches down.
- e) Apron Management shall advise the TWR of the aircraft stand or place that it has allocated to an arriving aircraft as early as possible and before it reaches the point of transfer of control.

5. ALLOCATION OF AIRCRAFT STANDS

- a) Allocation of Aircraft Stands or parking bays is the responsibility of the aerodrome operator.
- b) In assessing the demand for aircraft stands on particular day or for a particular period of that day, the aerodrome operator shall consider:
 - i) The scheduled aircraft movement.
 - ii) The number of stands already occupied by aircraft especially those whose departure have been delayed, and.
- c) In allocating stands or bays, the aerodrome operator shall consider the following: -

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- i) The type of aircraft i.e. weight, wingspan, fuselage length, fueling requirements etc.
- ii) The airports movement schedule for the day.
- iii) The principle of first come first served.
- iv) Duration of the intended parking.

6. RULES AND PROCEDURES FOR AIRCRAFT MARSHALLING

Marshalling is a service provided to an arriving aircraft so that it can move safely from the edge of the apron to its allocated parking stand/bay and from that position to the edge of the apron when it departs.

The marshalling of aircraft shall be carried out in accordance to the provisions adopted from ICAO Annex 2 Chapter 3. The marshalling and parking of aircraft shall ensure that aircraft are guided and parked clear of other aircraft, vehicles, and fixed or stationery objects by at least the following margins: -

Light aircraft
Mid size aircraft
Large aircraft
3 meters
4.5 meters
7.5 meters

7. AIRCRAFT PUSHBACKS

Aerodrome operators shall establish procedures or ensure that procedures are in place to ensure aircraft pushbacks are conducted safely. The following shall be included in the procedures:

- a) ensure that conflicts with other pushbacks in progress or with an aircraft that is ready to taxi, as well as with other traffic on the apron, are avoided;
- b) prior to pushback, ensure that the area behind the aircraft is clear of obstacles; and
- c) after pushback, ensure that the aircraft is positioned in such a way as to avoid concentrating break-away blast at buildings, parked or taxiing aircraft, vehicles and/or persons on the apron.

In some cases, aircraft operators may request to "power-back" from an aircraft stand. Given the potential hazards created by power-back operations, a safety assessment shall be carried out prior to approval of the procedure. The safety assessment shall include the following factors, at the minimum:

a) jet blast or propwash;



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- b) surface conditions;
- c) noise levels;
- d) communication with other apron users that a power-back is about to take place (especially if there is a rear of stand road);
- e) maneuvering space;
- f) conflict with other traffic (pushback, power-back or taxiing); and
- g) effect on pedestrians, buildings, vehicles, mobile equipment and other aircraft.

8. PROCEDURES FOR ENGINE START – UP

Pilot normally seeks from the control tower a clearance to start up engines. Before allowing an aircraft to start engines, the aerodrome operator through the designated officer or an aircraft operator's engineer shall ensure that the aircraft is in a state in which it can safely do so in relation to people and equipment around and behind the aircraft.

9. LEADER (VAN) SERVICE

Aerodrome operator shall develop procedures for leader (van) Service to provide quidance on movement areas of aerodrome for:

- a) Vehicles operation not familiar with apron layout;
- b) An experienced pilot when taxing in imperfect visibility condition; and
- c) Any other situations deemed leader van services necessary.

10. AIRCRAFT PARKING / DOCKING GUIDANCE SYSTEM

Aerodrome operator shall develop procedures for apron guidance system depend upon the accuracy of parking required and the type of aircraft operating. The simplest form of stand guidance where precise accuracy is not required will comprise stand identification and center line paint markings with an arrow to indicate the position in which the aircraft should be brought to rest. This system will be suitable for nose-in parking where the

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aircraft does not have to mate with a loading bridge and hydrant refueling is not in use. Paint markings must be maintained in a clean condition to ensure maximum visibility.

Where frequent night movements take place center line paint markings will be supplemented by center line lighting. These will comprise omni-directional fittings with a yellow filter. Switching for stand center line lighting will either be locally controlled or at the centralized apron control room. Where a nose-in stand is equipped with a loading bridge, precision parking is required to mate aircraft with the loading bridge. In such cases, a visual docking guidance system will be used.

Tanzania Civil Aviation Authority