International Civil Aviation Organization

The Eleventh Meeting of the MIDANPIRG AIM Sub-Group (AIM SG/11)

(Amman, Jordan, 22 – 23 January 2025)

Agenda Item 4: AIM Planning and Implementation in the MID Region

THE IMPLEMENTATION/PUBLICATION OF THE NEW AIRCRAFT CLASSIFICATION RATING (ACR) - PAVEMENT CLASSIFICATION RATING (PCR) METHOD IN THE MID MEMBER STATES

(Presented by secretariat)

SUMMARY

This paper presents the status of implementation and publication of the new Aircraft Classification Rating (ACR) - Pavement Classification Rating (PCR) method in the MID Member States.

Action by the meeting is at paragraph 3.

References

- ICAO Annex 14 to the Convention on International Civil Aviation, Aerodromes, Volume I – Aerodrome Design and Operations, 9th edition, July 2022, Amendment 17;
- ICAO Procedures for Air Navigation Services – Aeronautical Information Management (PANS-AIM), 1st edition, Amendment 1.
- ICAO Doc 8126, Ed7, Amendment No 1 (30 JUL 2024)

1. INTRODUCTION

1.1 The meeting may wish to recall that in 2020, ICAO adopted with Amendment 15 to Annex 14, Volume I Aerodromes — Aerodrome Design and Operations, a new method for expressing and calculating the bearing strength of a pavement, called the Aircraft Classification Rating (ACR) - Pavement Classification Rating (PCR). A transition period of 4 years had been set by ICAO and the new method has become applicable on 28 Nov 2024, replacing the current Aircraft Classification Number (ACN) - Pavement Classification Number (PCN) method.

1.2 The new method is more accurate as it determines the impact that each aircraft produces on a pavement. The expected benefits are optimised use of pavement, reduced maintenance needs and costs, and a reduction of greenhouse gas emissions through a well-managed pavement life cycle.

1.3 Just like the current ACN-PCN, the new ACR-PCR method is meant only for the publication of pavement strength data in the AIP. The ACR values were calculated by the aircraft manufacturers and made available either in the dedicated airport planning manuals or through a dedicated software. The PCR values will have to be determined by the aerodrome operators for all pavements intended for aircraft of apron mass greater than 5700 kg, and afterwards reported to the aeronautical information services providers for their publication in the aeronautical information

publication (AIP). The reported PCR will indicate that an aircraft with an ACR equal to or less than the reported PCR may operate on the pavement subject to any limitations (e.g. tyre pressure).

2. DISCUSSION

2.1 ICAO MID has developed and disseminated through SL File Ref.: ME 3/2.5 – 24/172 dated 7 November 2024, a Survey on the implementation/publication of the new Aircraft Classification Rating (ACR) - Pavement Classification Rating (PCR) method . This survey aimed to gather valuable feedback from Member States on the status of implementation/publication of the new ACR-PCR method.

2.2 The Survey consisted 4 questions, covering:

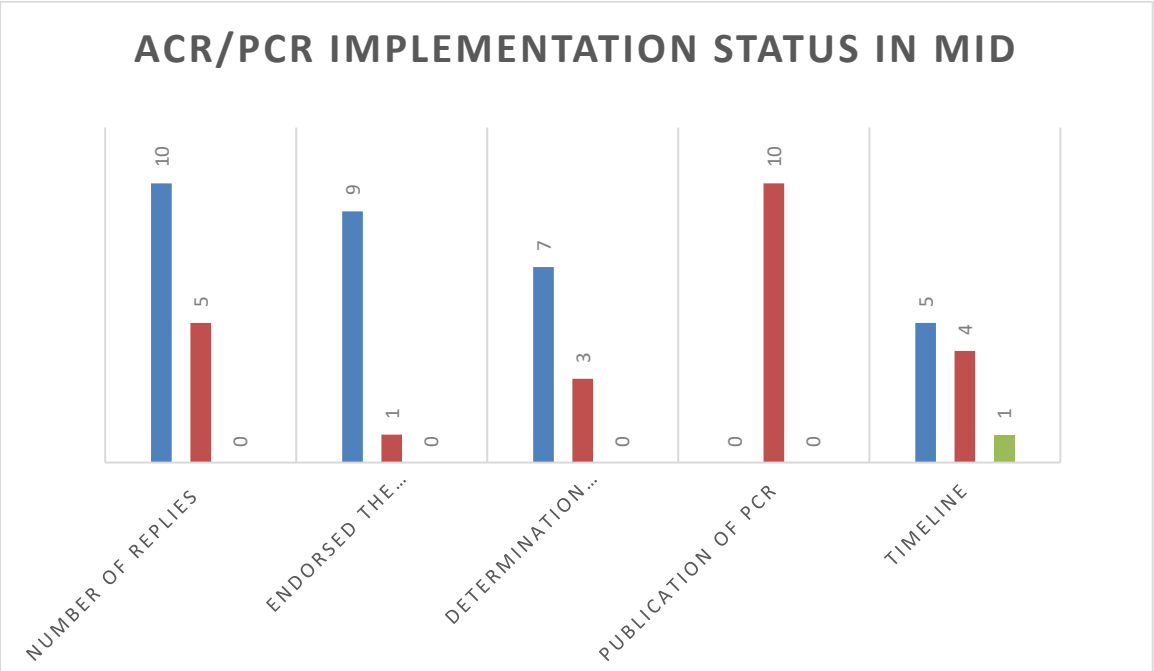
2.2.1 Has your State endorsed the new ICAO Aircraft Classification Rating – Pavement Classification Rating (ACR-PCR) system, replacing the ACN-PCN calculation method?

2.2.2 Has your State ensured that airport operators determine and provide the PCR for all the pavements intended for aircraft of mass greater than 5.7 tons required under Annex 14?

2.2.3 Has your State published the PCR for all the pavements intended for aircraft of mass greater than 5.7 tons according to the format defined in ICAO Annex 14 (§ 2.6.6)?

2.2.4 If No to the previous, how long do you estimate it would take your State to publish the PCR for all the pavements intended for aircraft of mass greater than 5.7?

2.3 The following graph illustrates the implementation status of the ACR/PCR in the MID Region, highlighting the number of endorsed replies, the determination and provision of PCR by airport operators (AP), and the publication timeline.



2.4 The following analysis provides an overview of the implementation status of ACR/PCR across the MID Region, focusing on key aspects such as endorsement, determination and provision by airport operators, publication status, and estimated timelines for completion.

- Most states (9 out of 10) have endorsed the new ACR-PCR. Only one state has not endorsed it.

- Several states (7 out of 10) have confirmed that airport operators are determining and providing the PCR. Three states have not yet reached this stage.
- None of the states have published the PCR yet.
- Estimated Time for Publication:

  - Four states estimate that they will publish the PCR in less than one year.

  - Five states estimate a timeline of 1-2 years for publication.

  - One state estimates a longer timeline of more than 2 years for publication.

2.5 Progress varies across states, with some (4 states) showing more advanced stages in the process. The main gap across all states is the actual publication of the PCR, which has not been completed by any state yet. Two states are lagging in both the determination/provision and publication phases.

2.6 To achieve effective implementation, it is essential for Civil Aviation Authorities (CAAs) and Aeronautical Information Service Providers (AISPs) to take immediate action to address the identified gaps and accelerate progress. These actions should focus on:

States Should:

1. Ensure effective coordination between the Aeronautical Information Service Providers (AISP) and Airport Operators (AP) regarding the implementation and publication of the ACR-PCR method.
2. Establish a well-coordinated National ACR-PCR Implementation and Publication Plan, providing necessary support to all relevant stakeholders throughout the process.
3. Submit a detailed action plan for the implementation and Publication of the new ACR-PCR method to the ICAO MID Office. Additionally, States should regularly update the MID Office on the progress and status of implementation.

AISP should:

1. Ensure that all relevant AIS personnel are formally updated about the content of the relevant provisions concerning the PCR values to be published in the AIP (AD 2.8 and AD 2.12), and on the aerodrome charts, and update the applicable AISP operating procedures and the formal arrangements with AP, as necessary;
2. Ensure that any software tools used for data handling and aeronautical product publication purposes are able to accommodate the new pavement strength method.
3. Receive the PCR values by the aerodrome operators and prepare the relevant information for publication.
4. Report any delay concerning PCR data originated by aerodrome operators to the CAA.
5. Ensure that PCR information is published for all aerodromes in a single publication, to avoid discrepancies of the published information at national level. It may require that a single AIRAC cycle is fully dedicated to this change, postponing any other airspace or other amendments to the next cycle[1].

2.7 To promote and foster the effective implementation and publication of the ACR/PCR methodology in a timely and uniform manner across the MID Region, the meeting is invited to consider and endorse the following draft conclusion:

[1] It requires careful planning with high advance-notice. It also raises the question of what the AISP should do if no information is received from some aerodromes, which is quite likely to happen if/when there are many of them concerned

DRAFT CONCLUSION 11/XX: PUBLICATION OF THE PCR IN STATES AIPS

That, States be urged to :

a) Ensure effective coordination between the Aeronautical Information Service Providers (AISP) and Airport Operators (AP) regarding the implementation and publication of the ACR-PCR method.

b) Establish a well-coordinated National ACR-PCR Implementation and Publication Plan, providing necessary support to all relevant stakeholders throughout the process.

c) Submit a detailed action plan for the implementation and Publication of the new ACR-PCR method to the ICAO MID Office. Additionally, States should regularly update the MID Office on the progress and status of implementation.

and AISP be urged to:

a) Ensure that all relevant AIS personnel are formally updated about the content of the relevant provisions concerning the PCR values to be published in the AIP (AD 2.8, AD 3.8 and AD 2.12), and on the aerodrome charts, and update the applicable AISP operating procedures and the formal arrangements with AP, as necessary;

b) Ensure that any software tools used for data handling and aeronautical product publication purposes are able to accommodate the new pavement strength method.

c) Receive the PCR values by the aerodrome operators and prepare the relevant information for publication.

d) Report any delay concerning PCR data to be originated by aerodrome operators to the CAA.

e) Ensure that PCR information is published for all aerodromes in a single publication, to avoid discrepancies of the published information at national level.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the survey results provided;

b) note the best way forward proposed;

c) discuss the feasibility of a publication of a single AIRAC cycle fully dedicated to this change, postponing any other airspace or other amendments to the next cycle; and

d) consider adoption of the draft conclusion as proposed in paragraph 2.9.

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