



ACR-PCR

IMPLEMENTATION IN THE APAC REGION

ICAO MID – SPIG/7 MEETING

RIYADH, SAUDI ARABIA

6 – 10 APRIL 2025

OBJECTIVES & OVERVIEW

- To share ACR-PCR implementation approach in the APAC Region
- Consist of summarize working and information paper presented ICAO APAC meeting
- Conclusion of ACR-PCR implementation approach in APAC region



ACR-PCR IMPLEMENTATION IN APAC REGION

- Workshop on Aerodrome Pavement Design and Evaluation including ICAO ACR-PCR Method of Reporting Format Pavement Strength conducted on 7 – 9 February 2024 at ICAO APAC, Bangkok Thailand supported by US FAA
- **Republic of Korea, China and Malaysia** shared their experience at the Eight Meeting of the Aerodrome Operations and Planning Sub-Group (AOP/SG/8)



ACR-PCR IMPLEMENTATION BY CHINA

- Established a team of professional researcher to study the ACR-PCR theory.
- Established an action plan to cover all the airports in China, a total of 260 airports
- Collaborate with academic institute and develop a software to calculate the PCR – Mr Jiake Zhang, zhijake@tongji.edu.cn
- For more details, please refer
 - [AOP-SG/8 – WP 23 : Implementation of Evaluating the Airport Pavement Bearing Strength by ACR – PCR Software in China](#)
 - [AOP-SG/8 – WP 24 :Challenges and Countermeasures for the Adjustment of Aerodrome Pavement Strength Report Format](#)



ACR-PCR IMPLEMENTATION BY MALAYSIA

- **Phased Approach:** Two phases for implementation.

- **Phase I:**

- Established a task force comprised of Subject-Matter Experts in pavement engineering, aerodrome regulatory compliance, and aviation safety.
- Focus on specialized training by ICAO and external parties on the theory and use of FAARFIELD software
- Comprehensive data collection across all airports including design assessment of pavement and onsite testing.
- Initial declarations using Aircraft Experience (U) data, facilitated by ICAO-ACR software, spanning eleven months.

- **Phase II:**

- Established safety assessment report with action plan for technical evaluation span over 2024 - 2028.

- For more details, please refer

- [AOP-SG/8 – IP 14: Implementation Roadmap and Challenges in Malaysia's Transition from ACN-PCN to ACR-PCR System for Aerodrome Pavement Bearing Strength](#)



ACR-PCR IMPLEMENTATION BY REPUBLIC OF KOREA

- Case study: Incheon International Airport
- Established a timeline for implementation for one (1) airport
- Understand the difference between ACN – PCN vs ACR – PCR
- Refer ICAO Design Manual (Doc 9157, 2022) Part 3 for the calculation method
- Apply Cumulative Damage Factor (CDF) method published in Aerodrome Design Manual (Doc 9157, 2022) Part 3
- For more detail, please refer:
 - [AOP-SG/8 – IP 12: Strategies for Implementing ACR - PCR](#)



CONCLUSION

- All States strive to publish the ACR-PCR by the 28 November 2024
- Approach differ and subject to the approval of governing States
 - Establish own software to calculate the data gathered from hundreds of airports.
 - Published data based on aircraft experience supported with a safety assessment report detailing plan for technical evaluation by appointed contractor.
 - Manual calculation referring to ICAO Aerodrome Design Manual (Doc 9157, 2022) Part 3
- All approaches depended on total number of airports manage by the airport operator.



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