



**ASSEMBLY — 38TH SESSION**

**TECHNICAL COMMISSION**

**Agenda Item 31: Aviation Safety – Standardization**

**CRITERIA FOR THE CERTIFICATION OF AERODROMES**

(Presented by the Interstate Aviation Committee)

**EXECUTIVE SUMMARY**

Flight safety enhancement is directly related to the implementation of the requirements of Annex 14 — *Aerodromes*, on the certification of aerodromes.

ICAO has performed a lot of work on the provision to the States with the material on the certification of aerodromes. However, considerably less progress has been achieved in the establishment of certification criteria which are required for a comprehensive evaluation of the flight safety level during the certification of aerodromes.

**Action:** The Assembly is invited to consider this working paper and to request ICAO Council to conduct a study in this field and to develop a code of criteria for the certification of aerodromes.

<i>Strategic Objectives:</i>	This working paper relates to the Safety Strategic Objective.
<i>Financial implications:</i>	Financing within ICAO regular programme budget.
<i>References:</i>	Annex 14, Volume I, <i>Aerodrome Design and Operations</i> Doc 9774, <i>Manual on Certification of Aerodromes</i>

**1. INTRODUCTION**

1.1 Annex 14 — *Aerodromes* requires that aerodromes be certified in accordance with the specifications contained in that Annex as well as with other relevant ICAO specifications (Volume I, paras 1.4.1, 1.4.2) through the establishment of criteria and procedures for the certification of aerodromes (Volume I, para 1.4.3).

1.2 According to Chicago Convention ICAO requirements are set forth in the form of Standards and Recommended Practices (SARPS) in Annexes as well as in the form of Procedures for Air Navigation Services (PANS).

<sup>1</sup> Versions in Russian and English are presented by the Interstate Aviation Committee (IAC).

1.3 ICAO has performed a lot of work on the provision to the Contracting States with the material on the certification rules. Since 2001, the *Manual on Certification of Aerodromes* (Doc 9774) has been in force, and PANS-Aerodromes has been drafted.

1.4 Considerably less progress has been achieved in the development of instructions on the establishment of criteria for the certification of the aerodromes. The absence of the specific instructions could lead to the existence of different approaches to composition of these criteria. As a result of addressing that task at the discretion of each particular aviation administration, a compliance with the comprehensive evaluation requirement of Annex 14 during the certification of the aerodromes may not be secured.

## 2. DISCUSSION

2.1 The only material on the certification criteria of the aerodromes is provided in para 3A.3 Standards and Practices of the *Manual on Certification of Aerodromes* (Doc 9774):

*“Any reference in these regulations to aerodrome standards and practices is a reference to the Standards and Recommended Practices (SARPs) in the latest version of Volume I to Annex 14 to the Convention on International Civil Aviation, and the national regulations and practices as amended from time to time.”*

which does not identify, even in a very general form, “other relevant ICAO specifications” provided in Annex 14 (Volume I, para 1.4.1) as in the case of Annex 3 — *Meteorological Service for International Air Navigation*, PANS-OPS or PANS-ATM.

2.2 At the same time, in accordance with the provisions of this Manual (Doc. 9774), aviation administrations when certifying an aerodrome should be assured that the holder of an aerodrome certificate “is competent to ensure that the aerodrome, its associated airspace and the operating procedures are safe for use by aircraft”, and the basic aviation law of the State should “provide for the necessary coordination with other agencies, air traffic services, meteorological authorities and security to ensure safe aircraft operations”.

2.3 It is apparent that the above requirements provide not only for the assurance of the compliance with the relevant standards of Annex 14, but also with Annex 11 — *Air Traffic Services* and PANS-ATM (local centers and procedures), Annex 10 — *Aeronautical Telecommunications* (local centers/CNS equipment), Annex 3 — *Meteorological Service for International Air Navigation* (local meteorological services and equipment), Annex 6 — *Operation of Aircraft* and PANS-OPS (aircraft operations), Annex 17 — *Security — Safeguarding International Civil Aviation against Acts of Unlawful Interference* (aviation security), as well as with Annexes 4 — *Aeronautical Charts* and 15 — *Aeronautical Information Services* (local centers of aeronautical information and charts).

2.4 Accordingly, during ICAO audits under USOAP program availability of necessary coordination and integration on the certified aerodromes had to be proved by the States in paragraphs AGA 8.093 and AGA 8.095 of ICAO protocol of the audit of aerodromes, air routes and ground facilities (CMO/QMSF-007-07/C).

2.5 More than 30 year experience available in the Member-States of the Agreement on Civil Aviation and Use of Airspace confirms, inter alia, that one of the ways of achieving necessary coordination during the certification process is a utilization of a code of criteria for the certification of the

aerodromes based on the respective ICAO SARPS and PANS provided the appropriate status is granted to those criteria. Such approach could be of interest during ICAO audits under USOAP program.

2.6 Volume I of Annex 14 includes two types of requirements: the first one is related to the planning and design of the aerodromes and the second one is related to the aerodrome operation and service. In principle, certification criteria can include requirements related to the design of the aerodrome. However, it does not mean that all of them can be used as certification criteria as some of the requirements are related to the design only and described with the special reservations, such as “to achieve the goals assigned at the design stage”, “should be built”, “should be designed” etc. Obviously such criteria cannot be used during the certification of the existing aerodrome.

2.7 Annex 14 consists of a great number of provisions with a status of Recommended Practice. Approximately 85% of provisions in Chapter 3 “Physical Characteristics” of Volume I have a status of recommendations. Application of this kind of provisions in certification requires an upgrade of their status within the framework of national standards as compliance with the recommendations is only a desirable factor for the provision of flight safety.

2.8 The requirement for States to establish criteria for the certification of the aerodromes implies a utilization of the detailed requirements to the characteristics and parameters of aerodrome elements and their equipment. As an example, the requirements of Volume I of Annex 14 to air navigation lights implies not only the availability of different kind of lights and their location on an aerodrome (Chapter 5), but also their light characteristics provided in Appendices 1 and 2. During the process of certification of an aerodrome a confirmation of meeting of those requirements may be a very complicated and inefficient exercise.

2.9 Some specifics of Volume I of Annex 14 mentioned above demonstrate that it could not be considered as a document which fully satisfies the tasks of aerodrome certification as a set of criteria to be applied. Doc. 9774 also does not clarify the issue leaving a solution of that problem within the frameworks of the national regulations of the States. Therefore, a number of Contracting States apply in their airdrome certification practices criteria which are directly oriented for this purpose and, when necessary, include appropriate provisions of other SARPS as well as ICAO PANS. Based on experience with such an approach, the task of the aerodrome certification stipulated in Volume I of Annex 14 could be addressed more efficiently from the flight safety point of view.

### 3. CONCLUSION

3.1 The application of SARPS as well as PANS for the certification of aerodromes is quite a difficult task. The effectiveness and the quality of performing of this task by the Contracting States can be enhanced by the creation within the framework of ICAO of a code of basic certification criteria that can be used by States subject to the national rules, including, as necessary, additional requirements applicable to the certification of aerodromes under the State jurisdiction.