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## **ASSEMBLY — 40TH SESSION**

### **TECHNICAL COMMISSION**

#### **Agenda Item 30: Other issues to be considered by the Technical Commission**

#### **DEFINITION OF AN ACCIDENT—SERIOUS INJURY**

(Presented by the Republic of Korea)

#### **EXECUTIVE SUMMARY**

The definition of an aircraft accident is clearly prescribed in Annex 13 to the Convention on International Civil Aviation. The definition of an aircraft accident in Annex 13 includes serious injury. Consideration to amend the definition of an accident (serious injury) related to burn injuries can be issued.

*Strategic Objectives:*

This information paper relates to the Safety Strategic Objectives.

*Financial implications:*

*References:*

Annex 13 – *Aircraft Accident and Incident Investigation*

## 1. INTRODUCTION

1.1 The definition of an aircraft accident is clearly prescribed in Annex 13 to the Convention on International Civil Aviation, and in accordance with the definition of this accident, the investigating authority in the State where the accident occurred will take the required actions with the States concerned. Relevant organizations, such as airlines, are also required to implement various matters, such as mandatory reporting, as defined under this definition, and the record of the number of accidents is also a measure of the level of safety of airlines.

1.2 The definition of an aircraft accident in Annex 13 includes serious injury, and the definition of a serious injury includes second or third degree burns without mention of specific areas, ranges or duration of treatment. Since such burns are regarded as serious injuries even if they occur in the smallest parts of the body, there is a significant deviation from other serious injuries, leading to confusion on the classifying of accidents by airlines and others.

1.3 It would be appropriate that the definition of a serious injury in Annex 13 specify the extent or duration of treatment for second or third degree burns, or eliminate them from the definition, allowing the aviation industry to reconsider the seriousness implied by an aircraft accident and to prevent accidents in the future.

## 2. DISCUSSION

2.1 Aircraft accidents refer to the cases of total or substantial aircraft damage or human fatality or serious injury.<sup>1</sup> Hence, serious injuries are considered aircraft accidents, which include more than 48 hours of hospitalization, fractures, severe haemorrhagic lacerations, internal organ injuries, burns of more than 5% of the body, verified exposure to infectious substances or radiation. Unspecified of any kind second or third degree burns are included in serious injury along with described above. Such burns can occur in a very small area on a finger, and according to the definition set out in Annex 13, it can be still defined as a serious injury, thus can be considered as an accident.

2.2 Unless a clear definition of aircraft accidents is specified, it may cause doubts about other items, as well as a reduction in the reliability of international Standards and Recommended Practices, and may cause confusion to aviation safety personnel's awareness of aircraft accidents.

2.3 A burn is caused by the heat applied to the body, and the depth and extent of the burn are determined by the intensity of the heat, the time of contact, and the thermal conductivity of the contacted tissue. The most common causes of burns are flames and hot water. In addition, burns can be caused by contact with hot iron or when exposed to extremely toxic chemicals or radiation.<sup>2</sup>

2.4 Burns are classified into hot water burns, flame burns, electric burns, contact burns, and chemical burns, depending on the cause, and are classified into 1 degree to 4 degrees according to the degree of skin invasion of tissue damage.<sup>3</sup> A first degree burn or superficial is a

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<sup>1</sup> Ibid.

<sup>2</sup> Lee, SH, Disaster Prevention and Insurance, 2002.

<sup>3</sup> Hanriver Sacred Heart Burn Injury Center, Guidelines for Burn Injury Patient Families, 2007.

case where only the epidermis is burned, which is often a sun burn. Second degree burns (or partial thickness burns) are cases where a burn is placed on a portion of the dermis as well as the epidermis. Third degree burns (full-thickness burns) include the entire skin layer and damage to the entire dermal layer and subcutaneous fat layer.<sup>4</sup>

2.5 Rapid treatment are required for any burns. Superficial second-degree burns can be healed without leaving scars after wound treatment is completed within one to three weeks. Deep second-degree burns are often mixed with second- and third-degree burns, but they can be cured with simple treatment, but often require surgery.<sup>5</sup>

2.6 Depending on the area of the burn, the degree of severity can vary greatly between age groups. It is not reasonable to include second or third degree burns in the category of serious injury without any preconditions. In Annex 13, “burns of more than 5% of the body's surface” or injuries requiring more than 48 hours of hospitalization are designated as serious injuries, so severe burns can be categorized into either or both of two categories.

### 3. CONCLUSION

3.1 The Assembly is invited to consider the need for the Accident Investigation Panel (AIGP) to review and amend as necessary the definition of an accident, with particular interest in clarifying the definition of burn injuries that are classified as serious injuries.

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<sup>4</sup> Lee, SD, Relations Between Health Standards and Life Quality of Burn Injury Patients, 2004

<sup>5</sup> Park, BY et al, Hanriver Sacred Heart Burn Injury Center, 2009.