WORKING PAPER

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A35-WP/265
EX/109
29/09/04
English only

ASSEMBLY – 35TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 16: Improvement of safety oversight

BRAZILIAN AVIATION SAFETY MANAGEMENT AN OVERVIEW

(Presented by Brazil)

INFORMATION PAPER

SUMMARY

This paper outlines the Brazilian Safety System coordinated by the Brazilian Aviation Safety Center, namely the Aeronautical Accident Prevention and Investigation Center - CENIPA.
Action by the Assembly is in paragraph 6.

REFERENCES

Annex 13
A35-WP 63

1. INTRODUCTION

1.1 Accident prevention statistics studied worldwide have shown, as a general rule, that each region should develop its own safety measures according to the existing local culture, predominant weather, aviation community's peculiarities, etc. Obviously, there are many common areas in which similar procedures can be addressed, like C.F.I.T. accidents, for example.

1.2 Brazil, as a unique country among so many others, has strived continuously in pursuing a better safety level. Despite its needs and challenges as a developing nation, Brazil has the world's second largest corporate aviation fleet and the biggest airport in South America - São Paulo International Airport (Guarulhos).

1.3 Initially, a brief description of the Brazilian Safety System will be presented, as a system designed to help safety investigators cope with local characteristics, in other words, a system that paves the way for a cheaper and more dynamic accident investigation and prevention activities. Some statistics will be shown to corroborate the job done.

1.4 Finally, the paper will show how the Brazilian Safety Center is optimizing aviation safety at maybe the most delicate place as far as aircraft operation is concerned, the airport. A safety course was specially developed for airport personnel, making them aware and attentive to areas affecting flight safety.

2. THE SIPAER (BRAZILIAN SAFETY SYSTEM)

2.1 SIPAER stands for Aeronautical Accident Prevention and Investigation System, being in charge of all safety matters in Brazil. The Aeronautical Accident Prevention and Investigation Center - CENIPA – is the SIPAER's central office.

2.2 The CENIPA is located in Brasília, being under the Chief of Staff, who reports directly to the Air Force Command.

2.3 As a system, the SIPAER has a dynamic and modern structure, allowing an expeditious flow of information and without bureaucratic drawbacks. All airlines, be it either commercial, regional, or commuter, as well as aircraft manufacturers, flying schools, Air Force Bases, and so on, are required to have a safety office in their organization structure. All those offices, called "safety links" (SIPAER jargon), report to the CENIPA and to one another on a systemic basis.

2.4 In summary, the CENIPA (hereafter also called the Safety Center) is the top supervisor for every single aircraft accident and incident investigation performed in Brazil, regardless of whether it involves domestic or international flights, civil or military planes.

2.5 The investigation process has unique characteristics. For civil aviation, the SIPAER has seven main Regional Safety Offices - RSO (located at the Civil Aviation Regional Divisions), and one main supervisor at the Civil Aviation Department - DAC.

2.6 The RSOs are responsible for investigating all accidents in their respective areas, except occurrences involving aircraft operating under RBHA 121 (equivalent to FAR 121) which are handled by the DAC. Since the RSOs are distributed throughout the country, there is no "Go Team". Even for accidents with RBHA 121 operated aircraft, investigations are initiated by the respective RSO until the DAC takes over the process. All accident reports go through an Accident Investigation Chain - AIC, being CENIPA the final step.

2.7 The CENIPA is the sole responsible for issuing the Final Report and for controlling and supervising all Safety Recommendations, which are compulsory in Brazil.

2.8 As to the investigation team, the board is composed by both civilians and militaries. At this point, it is worth noting that civil and military pilots in Brazil share the same knowledge in accident investigation, since all investigators are graduated of the CENIPA and take the same course.

2.9 The course is a four-week training program with seven classes a day. There are over 40 different instructors (airline and air force pilots, engineers, psychologists, airport personnel, etc). The course is free of charge for nationals and foreigners pay a nominal fee. Students are faced with wreckage investigation techniques in the Crash Laboratory, which reproduces around 08 actual aircraft accidents. Up to now, the CENIPA has graduated over 5,000 students, with representatives from 18 States, mainly from Central and South America.

2.10 The CNPAA - National Aeronautical Accident Prevention Committee- enacted by Federal Decree in 1982, it gathers representatives from major aviation segments, both civil and military, to discuss areas affecting safety.

2.10.1 The Committee has 33 permanent members (major airlines, air taxi operators, manufacturers, General Aviation Association, Airline Union, Pilot Union, armed Forces, etc) and convenes at least twice a year.

2.10.2 Being an open forum for safety related matters, the CNPAA has attained significant accomplishment to better accident prevention in Brazil. Some positive results from the Committee, to mention a few, are the Airport Safety Area Resolution, established to minimize the presence of birds in the vicinity of airports, enacted by the Ministry of Environment in 1995, and the Flight Safety Confidential Report (RCSV), a voluntary and non-punitive safety report adopted in Brazil in 1997

2.11 CENIPA is also a member of Pan American Aviation Safety Team – PAAST, which last meeting was held in Brasilia, under CENIPA support.

3. STATISTICS

3.1 Despite the increasing number of aircraft, passengers, and aviation cargo in Brazil, there is a sector going reversely: the accident rate. Figure 1 shows that even though Brazilian civil aviation is booming, the accidents have significantly decreased.

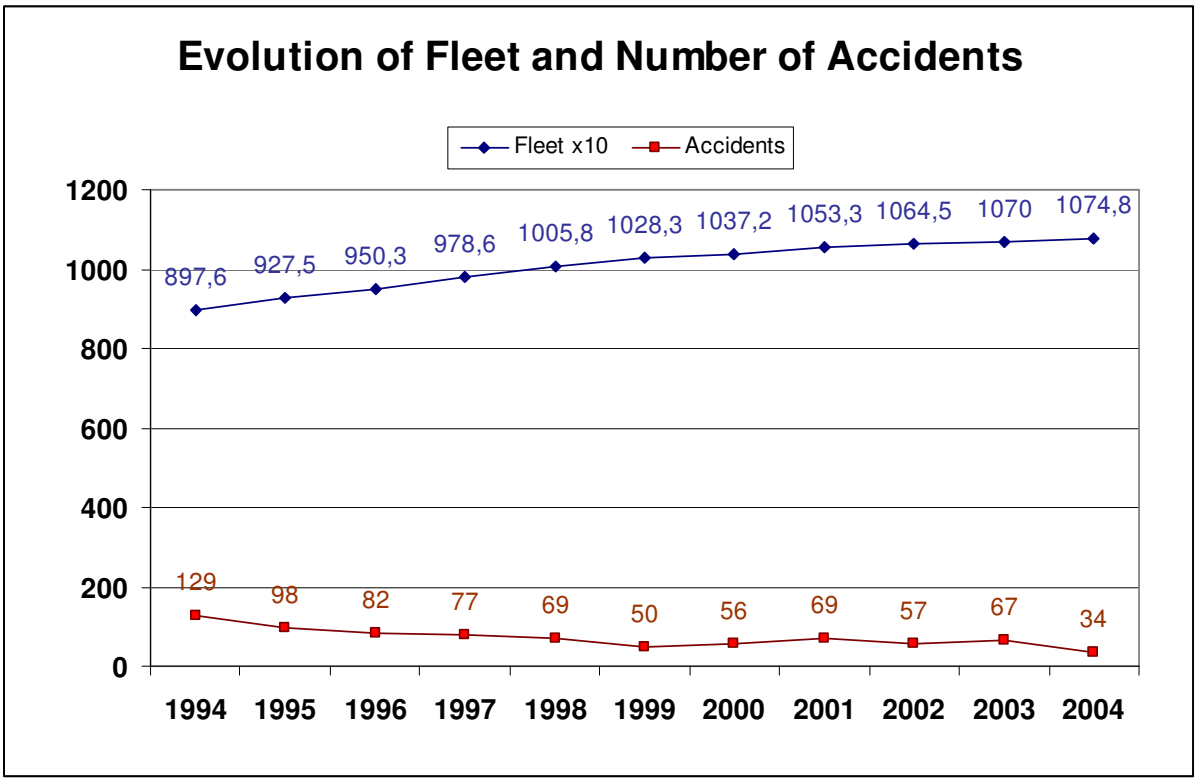
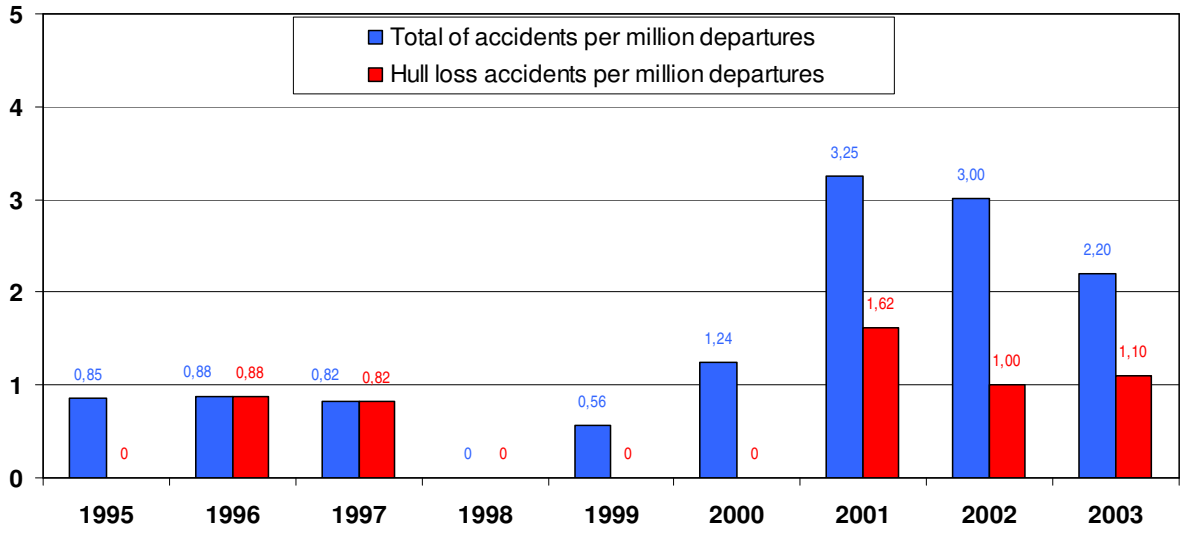


figure 1 – Evolution of fleet, accidents and rate between them. Source: CENIPA/DAC

3.2 Notice that the percentage of aircraft involved in accidents in relation to the fleet have dived from 1.4% in 1994 to 0.32% in 2003. Unfortunately, it was not possible to obtain the total hours flown by the whole Brazilian aviation, necessary to get the accident rate per 100,000 hours.

3.3 However, the figure below express the rate of accidents per million of departures for aircraft with maximum departure weight above 60.000 pounds (27.200 kg). From the period of 1995 to 2003, there was an average of 1,67 accident per million departures, with a total of 6 destroyed aircraft (hull loss) – an average of 0,67 accident per million departures.(figure 2)

AIR TRANSPORT ACCIDENTS PER MILLION DEPARTURES
Aeroplanes with a maximum takeoff mass in excess of 27.200 kg
1995-2003



	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total of accidents:	1	1	1	0	1	2	4	3	2
Hull losses:	0	1	1	0	0	0	2	1	1
Departures:	1.173.544	1.137.840	1.213.512	1.398.168	1.774.604	1.614.912	1.230.956	998.832	909.374

figure 2 - source: CENIPA/DAC

4. SAFETY AT THE AIRPORT

4.1 Accident investigation has the sole purpose of preventing other occurrences, thus making air transportation safer. A good and thorough investigation requires complete and prompt actions right after the event. Keeping this in mind, the CENIPA has developed a safety course for airport personnel, once they work close to where nearly 70% of accidents take place. By doing so, the Safety Center ensures that mishaps occurring around or at the airport will be handled accordingly from the beginning.

4.2 As to accident prevention, it suffices to remember the benefits gotten by airlines, passengers, and by the airport manager himself. To illustrate that, most reports the Safety Center has received related to hazards and incidents, that otherwise would probably have gone unreported, come from airport safety specialists. A healthy safety culture has been implemented at almost all Brazilian airports.

4.3 The course, namely Aviation Safety Course-Airports, is offered once a year and is free of charge for nationals. Incidentally, all safety courses held at the CENIPA are free of charge. Foreigners should pay a nominal fee

4.4 Subjects covered include, but are not limited to: Airport Emergency Plan; Airport Safety Survey; Bird Strike; Defensive Driving; Dangerous Good Handling; Apron Safety; Hazard Report Management; Basic Investigation Techniques; etc

4.5 So far, 893 people have attended that course. The vast majority of Brazilian airports have safety staff graduated at the CENIPA.

4.6 Today, given the ALA's (approach-and-landing accidents) impact on air transport crashes, it can be said that course is in the right

5. CONCLUSION

5.1 This paper starts going over the SIPAER, identifying the CENIPA as the central office for the Brazilian Safety System. Then, some statistics on the Brazilian civil aviation were discussed.

5.2 Following that, the paper covered the flight safety and the accident prevention at the airport and what Brazil has being doing to enhance the aviation safety culture through courses and seminars especially designed for airport personnel. Up today, there are roughly 900 airport people trained at the CENIPA.

5.3 Even with budget constraints, the Brazilian Safety System - SIPAER - has done its utmost efforts to keep as low as possible the aviation accident rate.

After all, the zero aeronautical accident is a goal, not necessarily a dream.

6. ACTION BY THE ASSEMBLY

6.1. The Assembly is invited to:

a) note the information contained in paragraph 2.9, related to the four-week aeronautical accident investigation course for airlines pilot, engineers, psychologists, airport personnel, etc; and

b) note that the information provided is a useful way to reduce the aeronautical accident rate by taking simple steps towards the awareness and training of all air transport segment.

— END —