



STATE COMMISSION ON AIRCRAFT ACCIDENTS INVESTIGATION

Final Report

Occurrence reference number:	<i>1877/14</i>			
Type of occurrence:	<i>ACCIDENT</i>			
Date of occurrence:	<i>20 July, 2014</i>			
Place of occurrence:	<i>Brazilia, Saõ Paulo State, Rio Claro</i>			
Type and model of aircraft:	<i>balloon: Cameron TR 70</i>			
Aircraft registration marks:	<i>SP-BBP</i>			
Aircraft User/Operator:	Aero Club of Włocławek			
Aircraft Commander:	<i>balloon pilot</i>			
Number of Victims/Injuries:	<i>Fatal</i>	<i>Serious</i>	<i>Minor</i>	<i>None</i>
			2	
Investigator-in-Charge:	<i>Tomasz Kuchciński</i>			
Investigation Authority:	<i>PKBWL</i>			
Composition of Investigating Team:	<i>Tomasz Kuchciński, Edward Łojek</i>			
Recommendations:	<i>NONE</i>			
Recipient of recommendations:	<i>NOT APPLICABLE</i>			
Date of completion of the investigation:	<i>13 October, 2015</i>			

Course and circumstances of the occurrence:

State Commission on Aircraft Accidents Investigation (SCAAI) was informed about the accident by the Brazilian Aeronautical Accidents Investigation and Prevention Center (CENIPA) on 16 October 2014. In the forwarded document CENIPA informed that it would not continue investigation into this accident. Therefore, SCAAI instituted the investigation and requested CENIPA to forward copies of documents relating to the accident. Until the end of the investigation SCAAI has not received any copies of the requested documents.

The information forwarded by CENIPA shows that:

During a flight performed in the framework of Hot Air Balloon World Championship two balloons collided. SP-BBP TR 70 Cameron balloon was flying below Kubicek BB22 balloon of unknown registration marks. The basket of the Kubicek BB22 balloon hit the upper part of the SP-BBP envelope and caused its extensive rupture. The damage was so serious that the pilot of the SP-BBP balloon could not continue the flight and made an emergency landing. Touchdown occurred in the backyard of a residence in the locality of Rio Claro.

According to commonly available information published by the Championship Event Director at (<http://www.debruijn.de/edpage/wwc2014/>) the balloons were flying relatively low, at low vertical speeds. Most likely the collision and rupture of the SP-BBP envelope occurred due to difference in speeds and inattention of the pilot flying higher.



The left photo shows the damage to the upper part of the SP-BBP envelope. The right photo shows SP-BBP landing with the envelope only partially inflated.

Source: <http://www.debruijn.de/edpage/wwc2014/>

A tear strength test of the SP-BBP envelope fabric showed that it was three times stronger than the required minimum. Examination of the basket of the balloon which flew higher showed some elements with sharp edges protruding outward. According to the Championship Event Director's personal opinion, if the elements with sharp edges had not protruded outside the basket, the collision probably would not have led to tearing of the envelope of the other balloon.

According to the SCAA opinion the fact that the crew suffered in the accident only minor injuries, should be attributed to a relatively low height of the collision.

Cause of the occurrence:

Failure to keep separation between the two balloons.

Contributing factors:

1. Participation in competitive sports, which resulted in high focus on achieving a result.
2. Probably the presence of sharp elements outside the basket of the balloon flying higher.

Preventive actions taken:

During the Women's World Hot Balloon Championship in Poland, in September 2014, the Event Director informed the pilots that the Safety Officer would check the balloons baskets for components with sharp edges. It was recommended that if such elements were present, they were to be covered with strong material, and locks of straps for fastening competition numbers on the baskets were to be placed inside the baskets.

Safety recommendations:

The Commission has not formulated any safety recommendations.

Commission comment:

The Commission draws attention to the fact that balloon pilots should regularly check the baskets for protruding, sharp edges. The protruding pieces of wicker should be cut, and any other protruding parts should be covered. This applies to each flight, not just participation in sport event.

The end

	Name	Signature
Investigator-in-Charge:	Tomasz Kuchciński	<i>signature illegible</i>
Member of the Investigating Team:	Edward Łojek	<i>signature illegible</i>