



## STATE COMMISSION ON AIRCRAFT ACCIDENTS INVESTIGATION

### Final Report

Occurrence reference number:	<b><i>1252/15</i></b>			
Type of occurrence:	<b><i>SERIOUS INCIDENT</i></b>			
Date of occurrence:	<b><i>3 July, 2015</i></b>			
Place of occurrence:	<b><i>Skotniki near Szczecinek</i></b>			
Type and model of aircraft:	<b><i>Kubicek BB-S balloon, Fish model</i></b>			
Aircraft registration marks:	<b><i>OK-1209</i></b>			
Aircraft User/Operator:	<b><i>private</i></b>			
Aircraft Commander:	<b><i>balloon pilot</i></b>			
Number of Victims/Injuries:	<i>Fatal</i>	<i>Serious</i>	<i>Minor</i>	<i>None</i>
				<b><i>3</i></b>
Investigator-in-Charge:	<b><i>Tomasz Kuchciński</i></b>			
Investigation Authority:	<b><i>SCAAI</i></b>			
Composition of Investigating Team:	<b><i>T. Kuchciński, E. Łojek</i></b>			
Recommendations:	<b><i>NONE</i></b>			
Recipient of recommendations:	<b><i>NOT APPLICABLE</i></b>			
Date of completion of the investigation:	<b><i>3 June, 2016</i></b>			

#### Course and circumstances of the occurrence:

##### History of the flight:

On 4 July, 2015 the pilot gave oral information concerning the course of the flight. He promised that he would write a detailed statement containing a description of the occurrence. Despite repeated requests, until completion of this Final Report the pilot has not sent any statement on the flight. Based on the collected information, the following circumstances of the occurrence were established:

The pilot participated in a balloon fiesta. He took off from recreational areas in Szczecinek and flew towards the north-west (heading about 330 degrees). After about 40-minute flight he was approaching to landing, about 6,5 km from the takeoff site. He reduced the flight height to land in a

meadow located northwest of the buildings of Skotniki village. When flying over the village, the balloon collided with a low-voltage (400 V) electric power line, which run at the height of about 8m.

According to oral information provided by the pilot, when he noticed the low-voltage electric power line on the flight path, he could not avoid a collision, due to low efficiency of burner resulting from a low gas pressure. He explained that the pressure of the propane-butane gas which he bought at a gas station to refuel the balloon cylinders was low, although within the operational limit of the balloon burner.

#### Damage to aircraft.

As a result of the collision with the electric line, the fabric of the balloon envelope was damaged. The extent of the damage prevented further flights without repair.

#### Other damage.

The collision caused a short-circuit of the electrical line and a break in the supply of electricity.

#### Crew information – the pilot.

Aged 32, holder of a free balloon pilot licence issued by Úrad pro civilní letectví of the Czech Republic on 3 December 2013, in accordance with ICAO requirements. The licence expired 8 April 2015 i.e. almost three months before the accident. On 3 March the pilot passed an exam renewing his hot air balloon class rating until 31 December 2016. The pilot had Aero-Medical Certificate Class 2 and LAPL valid on the day of the occurrence.

The pilot did not present his flight book. According to his oral statement his flight time was 222 hours including 183 hours as a Pilot-in-Command. On OK-1209: 6 flights during approximately 3 hours.

The records from OK-1209 balloon log showing the pilot's flight time on this aircraft are presented in the table below:

No.	Date	Hours	Time	Remarks
1.	4 April, 2015	17:30 – 18:30	1 h	
2.	11 April, 2015	17:50 – 19:10	1 h 20 min.	
3.	16 May, 2015	7:45 – 9:00	1 h 15 min.	
4.	3 July, 2015	20:30 – 21:10	0 h 40 min.	Serious incident.
<b>TOTAL:</b>		<b>4 flights during 4 h 15 min.</b>		

#### Aircraft information:

Hot air balloon: Kubiček, BB-S/Fish. Special shape envelope (fish) of 3000 m<sup>3</sup> volume and MTOM 850 kg. Basket – K16 type. Four fuel cylinders Worthington type were in the basket. Double burner IGNIS type.

Year of manufacture	Manufacturer	Envelope Serial No	Registration marks	Register Number	Register date
2011	Kubiček Balloons	845	OK-1209	4973	28.07.2014

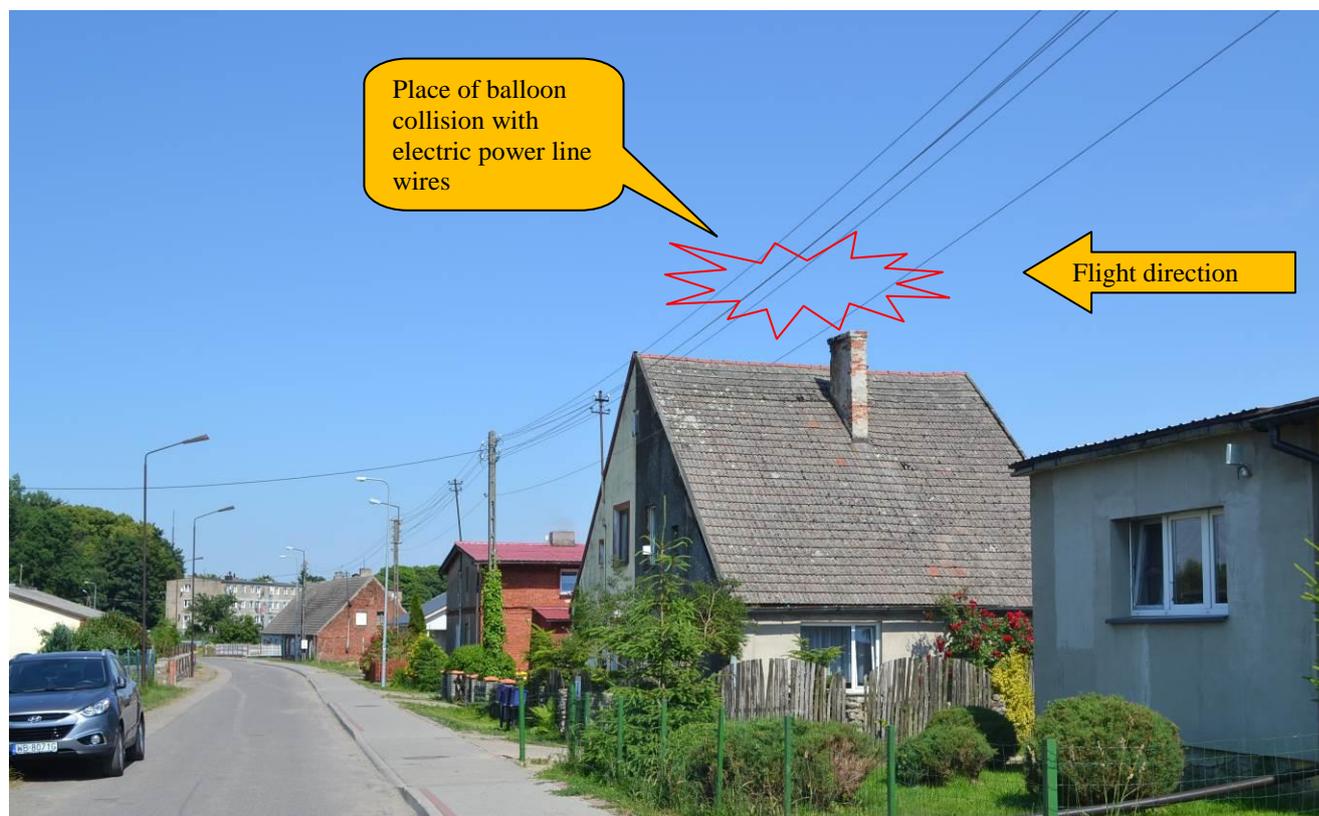
Airworthiness Review Certificate valid until: 11 August 2015  
Envelope total flight time since new: 8 h 55 min.  
Total number of flights since new: 8  
Last maintenance date: 31 July 2014  
Last Airworthiness Review date: 12 August 2014

Weather information:

The weather conditions were suitable for balloon flights. Surface wind speed was 1 - 2 m/s and there was no turbulence. The air temperature was about 28° C. Visibility in the flight direction was not restricted by the setting sun.

Place of occurrence information.

Flat area. Buildings of Skotniki village are one-storey or two-storey. The power line run along a street perpendicularly to the flight path of the balloon. The line wires were slightly below the roof of the building next to which the balloon flew.



*View of the place of balloon collision with electric power line wires. Source: SCAAI*

### Flight recorders

According to the pilot's statement, no flight data recording equipment was in the balloon.

### Wreckage and impact information.

The collision with the electric line was above the burner, probably at the level of the balloon envelope wires. After the collision basket of the balloon remained under the wires and the envelope over the wires. Electric power was cut off automatically due to the wires short circuiting.

### Medical information

- Nobody was injured.
- The pilot was not under influence of alcohol.

### Fire.

Fire did not occur.

### Survival aspects.

The pilot and passengers left the balloon basket unaided.

### **Analysis:**

The weather conditions did not affect the occurrence. The Commission concluded that despite the lack of current ratings (licence), the pilot with 180-hour flight time as a commander, should have had sufficient skills to perform the planned flight. He also had some experience in flying BB-S Fish balloon. According to the pilot's statement, the balloon was airworthy and the gas pressure was within the operational limits.

The Commission did not have the possibility of objective verification of the balloon flight parameters. Taking into account the circumstances of the serious incident, the Commission assumed that during approach to landing the pilot probably flew so low that the basket of the balloon was below the roof of a one-storey building. In this phase of the flight the electric line poles could have been be invisible to the pilot, and spotting wires is usually possible only from a very short distance. This led to the situation that after spotting the wires the pilot was not able either to fly over the line or to land before it. In the Commission opinion, terrain, weather conditions and indicated by the pilot intended landing site did not justify such a low flight.

### **Causes of the occurrence:**

1. Insufficient separation from ground obstacles;
2. Insufficient monitoring of the balloon flight path during approach to landing.

### **Preventive actions taken by the user:**

No information has been sent.

**Safety recommendations:**

The Commission has not formulated any safety recommendations.

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The end

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