



# MINISTRY OF TRANSPORT, CONSTRUCTION AND REGIONAL DEVELOPMENT OF THE SLOVAK REPUBLIC

**Aviation and Maritime Investigation Authority**  
Nám. slobody 6, P.O.BOX 100, 810 05 Bratislava 15



**Reg. No: SKA2011016**

## **FINAL REPORT**

on investigation of air accident  
unpowered paraglider **ANAKIS M**

Registration No. **OM-P326**

Date: 16.09.2011

Location: take-off and landing surface Chopok - Lúčky

## A. INTRODUCTION

The investigation of air accident, serious incident, has been conducted pursuant to Art. 18 of the Act No 143/1998 on Civil Aviation (Civil Aviation Act) and on Amendment of Certain Acts and in accordance with the Regulation (EU) No. 996/2010 of the European Parliament and of the Council on investigation and prevention of civil aviation accidents and incidents, governing the investigation of civil aviation accidents and incidents.

The final report is issued in accordance with the Regulation L 13 that is the application of the provisions of ANNEX 13 Air Accident and Incident Investigation to the Convention on International Civil Aviation.

The exclusive aim of investigation is to establish causes of accident, serious incident, and to prevent their occurrence, but not to refer to any fault or liability of persons.

This final report, its individual parts or other documents related to the investigation of the air accident in question have an informative character and can only be used as recommendation for the implementation of measures to prevent occurrence of other air accidents and serious incidents with similar causes.

Type of operation:	general aviation
Type of aircraft:	flying sports vehicle (hereinafter "FSV"), type unpowered paraglider "ANAKIS M"
Registration number :	OM-P326
Flight phase:	landing approach
Place of air accident:	take-off and landing surface for FSV Chopok – Lúčky
Coordinates of the place of air accident:	N: 48°58' 49,73'' E: 019°35' 53,99''
Date and time of detection of accident:	16.09.2011, 12:30

Note: All time data in this report are stated in the UTC time.

## B. INFORMATIVE SUMMARY

During landing approach of FSV with registration No. OM-P326 the aircraft fell to the ground from a low altitude

The pilot of FSV was seriously injured.

Person appointed for investigation of the air accident:

Ing. Milan GREGA

The report is issued by:

Aviation and Maritime Investigation Authority  
of the Ministry of Transport, Construction and Regional Development  
of the Slovak Republic

## C. MAIN PART OF REPORT

1. FACTUAL INFORMATION
2. ANALYSES
3. CONCLUSIONS
4. SAFETY RECOMMENDATIONS

### 1. FACTUAL INFORMATION

#### 1.1 History of the flight

In the final phase of training, the pilot of FSV made a high-level flight with take-off from the flight surface Chopok-Lúčky. The flight occurred without negative manifestations.

During the landing approach, in a low altitude, the airfoil of FSV became deformed and the aircraft fell to the ground.

The pilot was seriously injured in the fall.

The air accident was reported to the Aviation and Maritime Investigation Authority of the Ministry of Transport, Construction and Regional Development of SR on 20.09.2011.

Daytime: day

#### 1.2 Injuries to persons

Injuries	Crew	Passengers	Others
Fatal	-	-	-
Serious	1	-	-
Minor	-	-	-
None	-	-	-

#### 1.3 Damage to FSV

Cutting of a FSV seat strap by the rescue service in the effort to prepare the pilot for transport.

#### 1.4 Other damage

No circumstances with potential claims for compensation of other damage toward a third party were notified to the Aviation and Maritime Investigation Authority.

#### 1.5 Personnel information

##### Pilot of FSV:

Citizen of the Czech Republic, aged of 25 years, holder of FSV pilot cadet No. 08-PL-13, issued by the Light Aircraft Association of the Slovak Republic (hereinafter "LAA SR") on 10.09.2011.

##### Qualifications:

FSV pilot cadet – unpowered paragliders of class "A".

Medical certificate of a member of flight personnel of LAA SR valid until 09/2013.

Flying experience:

Total flight hours:	4 h 30 min and 50 flights
In it for previous 90 days:	4 h 30 min and 50 flights
In it for previous 90 days with the aircraft type:	4 h 30 min and 50 flights
In it on the day of air accident (incl. critical flight):	1 h 30 min and 3 flights

#### 1.6 Information about FSV

a) Type: ANAKIS M  
Serial No.: 110474  
Year of manufacture: 2011  
Manufacturer: Sky Paragliders, Czech Republic

Total number of operating hours since manufacture: 23 h 00 min and 110 flights

Certificate of airworthiness No. OM-P326, issued on 22.07.2011, with marked validity until 31.07.2012.

Sport class FAI	O - PG
Safety category (EN)	B
Minimum flight speed	23 km/h
Maximum flight speed	49 km/h
Minimum take-off weight	75 kg
Maximum take-off weight	95 kg

On the day of air accident no deficiencies in the airworthiness were detected before the flight and no negative manifestations in flight characteristics were registered during the flight .

**b) Take-off weight of FSV at the time of air accident:**

Empty weight of FSV	4,6 kg
Weight of crew	68,0 kg
Weight of equipment and baggage	15,0 kg

Total take-off weight at the time of air accident: 87,6 kg

Maximum permissible take-off weight of FSV according to Flight Manual is 95 kg.

Take-off weight of FSV was observed at the time of air accident.

#### 1.7 Meteorological information

CAVOK, north-west wind up to 4 m/s.

#### 1.8 Aids to navigation

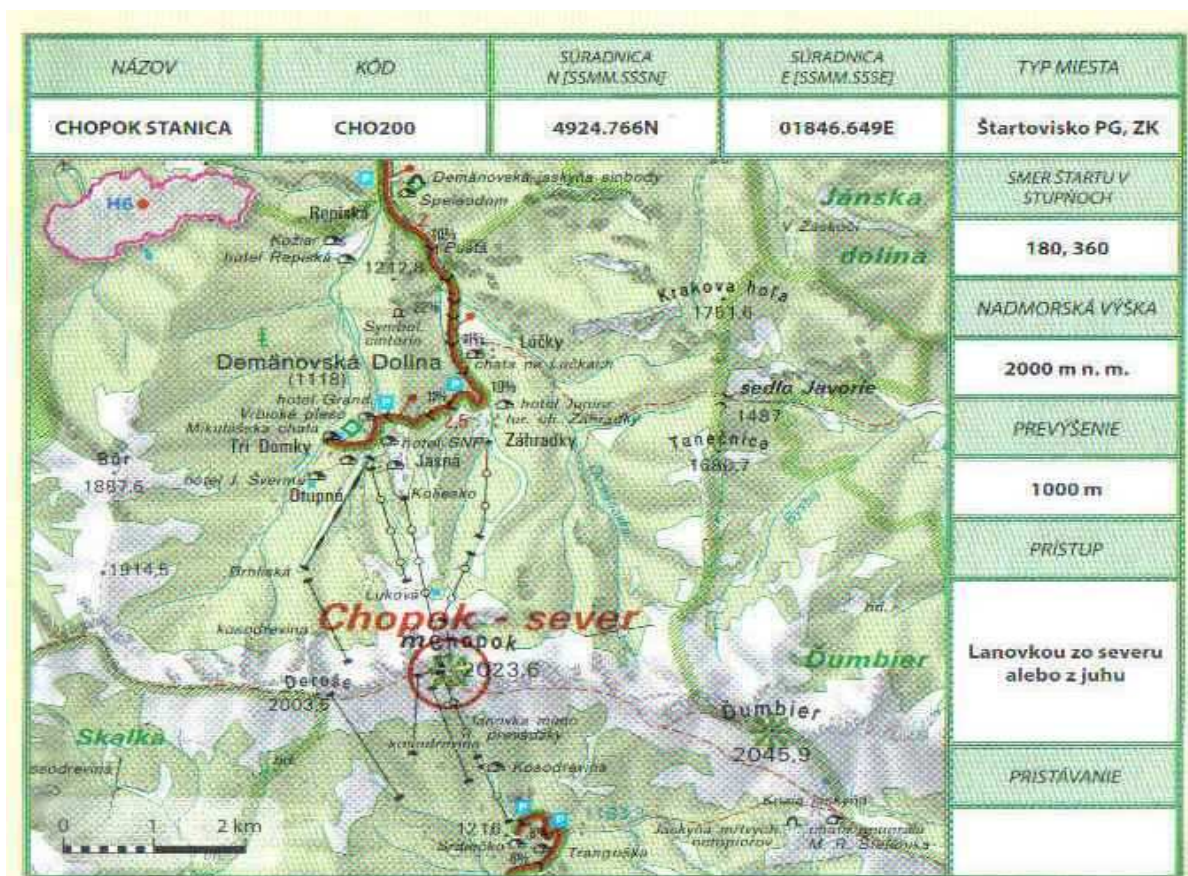
Not applicable.

#### 1.9 Communications

Not applicable.

#### 1.10 Aerodrome information

Take-off and landing surface for FSV – Chopok – Lúčky.



#### 1.11 Flight recorders and other recording systems

Not applicable.

#### 1.12 Wreckage and impact information

The place of air accident is situated on the south-east margin of the landing surface Chopok - Lúčky.



#### **1.13 Medical and pathological information**

The pilot of FSV was seriously injured. He suffered compression fracture of three vertebra.

#### **1.14 Fire**

No fire broke out during the air accident.

#### **1.15 Survival aspects**

No search was required. The rescue operations were implemented by the air rescue service.

#### **1.16 Tests and research**

Not applicable.

#### **1.17 Organizational and management information**

Not applicable.

#### **1.18 Additional information**

The pilot cadet did not apply for or take final pilot examinations after the accident.

#### **1.19 Useful or effective investigation techniques**

Standard investigation methods were used.

## **2. ANALYSIS**

The pilot cadet of FSV took off from the surface Chopok - Lúčky to make a free high-level flight in the final training phase. The meteorological conditions were suitable for this flight, with occurrence of suitable updraft flows. On that day, before the critical flight, the pilot cadet made two high-level flights during which he did not register any negative manifestations. He made the flights with FSV OM-P326.

During landing approach, in an altitude of 30 – 40 m above ground level, above the south-east margin of the landing surface Chopok - Lúčky, the pilot of FSV registered an updraft flow and a decline of the flight speed, which he evaluated as a value near the stopping. At that moment, after a deceleration, the airfoil significantly accelerated forward with turns, to which the pilot did not react properly by braking this movement using the controls. It caused a unilateral deformation of the airfoil, significant drop of the lift force due to this deformation and, in view of the very low flight altitude, the fall of FSV to the ground.

### **3. CONCLUSIONS / CAUSE OF AIR ACCIDENT**

#### **3.1 Findings**

- the pilot had valid qualifications for the flight in question,
- FSV had valid documentation and did not show any faults before the air accident,
- the meteorological conditions were suitable, with occurrence of updraft flows,
- the pilot cadet did not react to the situation after he had entered the updraft flow in the landing approach phase,
- the pilot was seriously injured in this air accident.

#### **3.2 Causes of air accident:**

- poor mastering of the flying technique by the pilot cadet after entry into the updraft flow in a low altitude in the landing approach phase.

### **4. SAFETY RECOMMENDATIONS**

On the basis of investigation of causes of the air accident of:

**FSV ANAKIS M**

Registration No. **OM-P326**

Date of accident: **16.09.2011**

We recommend **LAA SR** to implement the following measures:

- to implement an analysis with the flying personnel of LAA SR in the form of publication of the final report on the website of LAA SR;
- to managers of training centres of LAA SR to put stress on theoretical and practical preparation of pilots aimed to the landing manoeuvre in thermic conditions.

Bratislava, 04.09.2012