



KÖZLEKEDÉSBIZTONSÁGI
SZERVEZET
TRANSPORTATION SAFETY
BUREAU

FINAL REPORT

**2009-028-6
SERIOUS MARINE CASUALTY**

**Szigetköz
Cikolaszigeti Kőhídi Duna
3 May 2009**

**Inflatable boat
(not obliged to be registered)**

The sole objective of the technical investigation is to reveal the causes and circumstances of marine casualties, serious and very serious casualties as well as marine incidents, and to initiate the necessary technical measures and make recommendations in order to prevent similar cases in the future. It is not the purpose of this activity to apportion blame or liability.

This present investigation was conducted on the basis of

- Act XLII of 1995 on marine transport,
- SOLAS 1974/1978 and Act XI of 2001 on its proclamation,
- Act CLXXXIV of 2005 on the technical investigation of aviation, railway and marine accidents and incidents (hereinafter referred to as Kbv.),
- Decree 9/2006 (II.27.) of Ministry of Economy and Transport (MET) on the detailed rules regarding technical investigation of serious marine casualties and incidents.
- In absence of other related regulation of the Kbv., the Transportation Safety Bureau of Hungary conducted the investigation in accordance with Act CXL of 2004 on the general rules of administrative authority procedure and service,
- The competence of the Transportation Safety Bureau of Hungary is based on the Kbv. until 31st December 2006 and on Government Decree 278/2006 (XII. 23.) from 1st January 2007 respectively.

Under the aforementioned regulations

- The Transportation Safety Bureau of Hungary shall investigate serious marine casualties.
- The Transportation Safety Bureau of Hungary may investigate marine incidents which - in its judgement - would have resulted in casualties in other circumstances.
- The technical investigation is independent of any administrative, infringement or criminal procedures.

In addition to the aforementioned laws, the A.849 IMO Code (Code for the Investigation of Marine Casualties and Incidents) is applicable.

Incompatibility did not stand against the members of the IC.

Persons participating in the technical investigation did not act as experts in other procedures concerning the same case and shall not do so in the future.

This present final report shall not be binding, nor shall an appeal be lodged against it.

The IC shall safe keep the data having come to their knowledge in the course of the technical investigation. Furthermore, the IC shall not be obliged to make the data – regarding which the owner of the data could have refused the disclosure of the data pursuant to the relevant act – available to other authorities.

This present final report

is based on the draft report prepared by the IC and accepted by the Director-General of TSB. The draft report was sent to the relevant parties - defined by law - for reflections.

The IC did not receive any reflections on the draft report within the defined time frame, therefore this final report remains unchanged.

ABBREVIATIONS

MET	Ministry of Economy and Transport
GKM	(Gazdasági és Közlekedési Minisztérium)
IMO	International Maritime Organization
TSB	Transportation Safety Bureau
Kbvt.	Act CLXXXIV of 2005 on the technical investigation of aviation, railway and marine accidents and incidents
ms.	motor ship
MTW	Ministry of Transport, Telecommunication and Water
KHVM	(Közlekedési, Hírközlési és Vízügyi Minisztérium)
NAVINFO	Marine Emergency Assistance and Information System
NTA	National Transport Authority
RSOE	National Association of Radio Distress-signalling and Infocommunications
SOLAS	Safety of Life at Sea
IC	Investigating Committee

SUMMARY

Occurrence category		serious marine casualty
Vessel	manufacturer	Intex Kft
	type	inflatable boat
	flag	not required
	registration	not required
	serial number	n.a.
	owner	natural person
	operator	natural person
	charterer	n.a.
Occurrence	date and time	3 May 2009 12:00 LT
	location	Dunakiliti
	fatalities	1 person
	number of seriously injured	0
Extent of damage to vessel		boat disappeared
Country of registry		not obliged to be registered
Registration authority		n.a.
Authority supervising manufacturing		unknown
Competent investigating body (according to the location of the occurrence)		TSB

Reports and notifications

The casualty was reported to the duty services personnel of TSB by the officer on duty of the competent police at 21:02 hrs on 3 May 2009.

The on duty personnel of TSB reported the occurrence to TSB's head of department on duty at 21:04 hrs on 3 May 2009.

Investigating Committee

The Director-General of TSB assigned the following Investigating Committee (hereinafter referred to as IC) on 5 May 2009 to investigate the serious marine casualty:

Investigator-in-Charge	László Kiss	accident investigator
Member of IC	István Barnácz	accident investigator

Synopsis of the investigation

The IC surveyed the site of the casualty, viewed and made photocopies of the documents and photographs at Mosonmagyaróvár Police Station and interviewed the witnesses.

Synopsis of the occurrence

Five Slovakian men were on a river tour with three inflatable boats in Szigetköz. They departed from Dunacsúny on 1st May. On the day of the accident, the men left the campsite they had stayed the previous night a few minutes before 12 o'clock. Having arrived at the stone-bridge at Cikolasziget, the bow of one of the inflatable boats got stuck in some scum and the current of the water suddenly overturned the boat. The water swept the boat under the bridge pillar where two people fell from the boat into the water. One of them was able to swim ashore and the other drowned.

1. FACTUAL INFORMATION

1.1 The course of the occurrence

The company of five Slovakian men was on a river tour with three inflatable boats in Szigetköz. They departed from Dunacsúny on 1st May. According to the participants of the tour, the boats were in good condition. The first two days of the tour were uneventful. They spent the night prior to the occurrence in tents at an old ferry port in Dunasziget. The water level of the Danube - 271 cm - was higher at the time of the casualty than the annual average (the flood had been subsiding). On the day of the accident, the men left the campsite they had stayed the previous night a few minutes before 12 o'clock (a.m.). The boat later involved in the casualty was travelling in the front with two passengers. The other two boats were approximately 100 metres behind it. The inflatable boats did not have engines, they were rowed by sculls. None of the participants of the tour wore life-jackets as - according to the witnesses - all of them were good swimmers. As the water level was high, they were unable to row past under the stone-bridge at Cikolasziget. They decided to moor on the right bank, a few metres before the bridge. The boat got caught on a large branch of a tree underwater at the concrete jetty leading to the bridge. The strong current suddenly overturned the boat and swept it towards the bridge as a consequence of which two people fell from the boat into the water. Although one of them managed to grab and hang onto the pillar of the bridge for a few seconds, the current was so strong that he was unable to hold himself up and so the water swept him further under the bridge. When he was on the other side of the bridge, he saw the other person approximately 15 metres in front of him, and heard that he was shouting for help. He swam to the other man and tried to keep him over the surface of the water, but he was unable to hold him up for more than a few minutes as he was losing his strength and became exhausted so he let go of him and swam to the riverbank. He then asked a person at the riverbank for help, who called the police and the ambulance. The people in the other two boats saw what had happened and immediately set off to help but by the time they got to the site of the grounding, they could not find the sunk man. The overturned boat got stuck in the span of the bridge so tightly that it could be pulled out only after piercing it with a knife. The fire-fighters were searching the site for hours after the casualty but they could not find the man. The drowned man was found 14 days after the occurrence, approximately 8 kms from the site, at Kisbodak.

1.2 Injuries to persons

Injuries	Crew	Passengers	Others
Fatal	1	0	0
Serious	0	0	0
Minor	0	0	0
None	0	2	0

1.3 Damage to vessel

The vessel got stuck under the bridge in the course of the occurrence. It could only be released by piercing it with a knife.

1.4 Other damage

The IC did not receive information about other damage by the completion of the investigation.

1.5 Personnel information

1.5.1 The captain of the boat

Age, gender, citizenship		33-year-old Slovakian man
Qualifications	Certificate valid	not required
	Medical certificate	not required
	Other certificate(s)	not required
Date of embarkation	Period of time in service on the given boat	n.a.
	in the last 12 months	n.a.
	in the last 30 days	n.a.

1.5.2 Chief engineer

n.a.

1.5.3 Other personnel

n.a.

1.6 Vessel data



Figure 1: Intex type inflatable boat (illustration)

1.6.1 Hull data

Length: 395 cm, width: 83 cm, weight: 33 kg

1.6.2 Main engine

There was no engine on the boat.

1.6.3 Data of faulty device

n.a.

1.6.4 Vessel loading data

The loading data had no effect on the course of events therefore its detailed description was not required.

1.7 Meteorological data

The weather was sunny at the time of the casualty. The temperature of the water was 14 ° C.

1.8 Aids to navigation

Not required for this type of vessel.

1.9 Communications

There was no communications equipment on board.

1.10 Port parameters

The casualty did not occur at a port. The river is 50 metres wide after the bridge and it widens to 160 metres under the bridge. Both roads leading to the bridge are concrete and their sides at the bridge are reinforced with ashlar. In time of floods, the scum can get caught on these ashlars as a consequence of which, irregular water movements are possible.

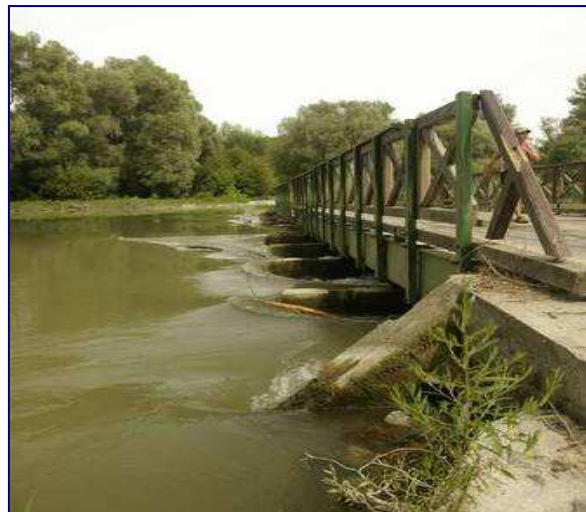


Figure 2: Stone-bridge at Dunakiliti, where the boat overturned

1.11 Data recorders

Not required for this type of vessel.

1.12 Wreckage information

The IC does not have information on what happened to the boat after the casualty.

1.13 Medical and pathological information

The medical forensic examination established that the cause of death was drowning.

1.14 Fire

There was no fire.

1.15 Survival aspects

If the drowned man had worn a life jacket, he would probably have survived the casualty.

1.16 Tests and research

The IC did not conduct special tests and research.

1.17 Organisational and management information

The characteristics of the organizational and management environment had no effect on the course of events therefore their analysis was not required.

1.18 Additional information

The IC did not receive other relevant information and it does not intend to publish additional information other than the factual information above.

1.19 Useful or effective investigation techniques

The investigation did not require techniques differing from the traditional approach.

2. ANALYSIS

The young man who died in the occurrence was experienced with regard to river tours and he was also a good swimmer. He had been to this reach of the river several times before, therefore he knew the surroundings and the hydrographical characteristics of the river well. However, he was not careful enough. His friend who survived the casualty said that the later drowned man had previously warned him that the boat should be pulled out of the river before the bridge at the right bank as they would be unable to sail through under the bridge, especially when the water level was high. They, however, went too close to the bridge probably as a result of strong currents of the swollen river. The people travelling in the boat disregarded the fact that there could be scum in the river and that the speed of the current increases at the pillars of the bridge because of the narrowing navigable waterway. When the later drowned man fell into the water, the current might have pushed him up against the bridge pillar as there was a 20-centimetre-long, 10-centimetre-wide epithelial injury on his right upper arm and one similar 20x20 injury on his right shoulder.

3. CONCLUSIONS

3.1 Factual statements directly connected to the occurrence of the casualty

In the course of the technical investigation, the IC established that the serious marine casualty occurred owing to the inattention of persons involved and as a result of the irregular currents of the swollen river.

The captain of the boat disregarded the characteristics of the swollen river and the stronger current when he was planning to moor in the immediate vicinity of the bridge. Therefore they were so close to the bridge that the current swept the boat and dragged it under the bridge. In this high water level, they should have moored way before the bridge so that they would be able to pull the boat out of the water. None of the participants of the river tour wore life jackets - they might have been overconfident of their swimming skills or found them uncomfortable to wear - yet wearing them would have prevented the occurrence of the fatal casualty.

4. SAFETY RECOMMENDATIONS

The IC does not wish to make safety recommendations.

Budapest, 17th March 2010

László Kiss
Investigator-in-Charge

István Barnácz
Member of IC

NOTE:

This present document is the translation of the Hungarian version of the Final Report.

Although efforts have been made to translate it as accurately as possible, discrepancies may occur.

In this case, the Hungarian is the authentic, official version.

Vízállás 06 GMT

8. oldal

Állomás név: Nagybajcs

[cm]

Folyó név: Duna

Listázás: 2009-Dec-12 09:15:59

m é r t

év: 2009.

NAP	JAN	FEB	MÁR	ÁPR	MÁJ	JÚN	JÚL	AUG	SZE	OKT	NOV	DEC
1	87	50	289	384	311	364	670	240	189	76	123	85
2	82	39	320	359	273	295	644	236	152	69	109	102
3	94	27	307	428	271	277	545	210	149	69	132	113
4	86	42	302	473	271	272	492	218	162	69	155	122
5	75	48	319	474	260	245	502	351	206	65	202	109
6	65	48	370	452	265	227	468	430	344	43	209	105
7	52	53	391	484	266	222	441	336	280	41	216	104
8	46	63	354	478	294	239	473	297	233	51	163	107
9	71	110	364	474	285	268	482	278	203	60	156	114
10	66	109	353	445	279	249	452	255	177	76	134	153
11	43	108	386	461	293	229	381	235	165	82	111	183
12	30	120	403	460	300	228	364	297	161	95	155	231
13	21	159	368	430	321	218	333	279	218	127	160	...
14	20	134	429	397	381	205	311	250	197	159	136	...
15	46	68	414	380	355	190	284	249	178	180	130	...
16	45	62	378	388	367	184	297	249	214	161	119	...
17	67	50	412	381	367	220	286	237	184	133	116	...
18	45	75	385	379	321	258	294	196	192	149	120	...
19	21	64	362	360	334	260	356	178	189	169	132	...
20	33	35	327	347	364	238	501	178	167	166	138	...
21	34	50	309	347	353	351	431	193	150	175	132	...
22	59	50	278	354	326	360	402	150	124	161	125	...
23	80	42	248	320	312	311	354	171	117	149	97	...
24	97	72	245	309	313	498	324	195	118	188	129	...
25	80	119	274	303	326	586	323	197	121	215	98	...
26	75	162	263	280	326	655	376	169	101	217	120	...
27	104	137	247	260	318	703	342	147	89	205	127	...
28	91	139	272	269	326	697	288	150	83	185	122	...
29	76		311	261	340	641	283	144	68	190	95	...
30	67		334	322	339	654	268	207	78	158	92	...
31	49		418		326		242	251		155		...
Átlag:	61	79	336	381	315	344	393	231	166	130	135	127
Min.:	20	27	245	260	260	184	242	144	68	41	92	85
Max.:	104	162	429	484	381	703	670	430	344	217	216	231

Évi átlag: 231 cm

minimum : 20 cm

maximum : 703 cm