



RAILWAY SAFETY AND ACCIDENT INVESTIGATION BUREAU

MOPTC

[Ministry for Public Works, Transport and Communications]

ANNUAL REPORT 2009



**GISAF – Gabinete de Investigação de Segurança e de Acidentes
Ferroviários**

30 SEPTEMBER 2010

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EXECUTIVE SUMMARY

In 2009 there were no serious accidents.

Two accident investigations were nevertheless opened in 2009 and concluded in 2010.

These accidents, falling under Article 21(6) of the Railway Safety Directive, did not have an impact on railway safety or the management of safety.

The first accident occurred on 8 July at 13:36 in the village of Corroios - Seixal, involving the Sul do Tejo metro, which collided with two elderly people crossing the track in an unauthorised area without taking proper precautions, as they were walking to a stop bus on the other side of the line. There was one fatality and one serious injury. The metro train was travelling at about 54 km/h.

The second accident occurred on 1 September at 05:55, on a category 5 level crossing with only passive signalling. An overcrowded car with seven people on board entered the level crossing without stopping and was hit by a regional train travelling at about 55 Km/h in a zone with a 90 km/h speed limit. The car was pushed along about 100m and the train came to a halt on a bridge, without derailing. In this accident there were six fatalities and one serious injury in the car and no injuries on the train.

The first Director of GISAF was appointed in late June, so the latter half of the year was devoted mainly to installation and initial organisation.

The first annual budget came into effect.

A – SUMMARY

This report complies with Article 23(3) of Directive 2004/49/EC of 29 April 2004, which stipulates that the body responsible for investigating railway accidents shall publish by 30 September at the latest an annual report accounting for the investigations carried out in the preceding year (2009), the safety recommendations issued and the action taken in accordance with such recommendations.

The principal aspects of this report are accordingly as follows:

- Organisation of GISAF and its resources;
- Description of procedures used;
- Identification of type of investigations carried out in 2009;
- Summary of investigations concluded and investigations carried forward to the following year;
- Recommendations.



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B – INTRODUCTION

The operation of GISAF is established in Decree-Law No 394/2007 published on 31 December 2007, which contains the relevant Organic Law and partially transposes into the domestic legal system Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on safety on the Community's railways and amending Council Directive 95/18/EC of 29 July 1995 on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification.

This Decree-Law set up the *Gabinete de Investigação de Segurança e de Acidentes Ferroviários* (Railway Safety and Accident Investigation Bureau – GISAF) and defined its scope, responsibilities and powers. Decree-Law 395/2007 of 31 December 2007 laid down GISAF's internal structure and staff recruitment method, mission and management procedures.



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C – ORGANISATION

In 2009 GISAF continued to operate on the provisional basis that began the previous year, until 26 June when its first Director, Mr Victor Manuel de Sousa Risota, was appointed and took up his post. He was appointed by Order No 15033/2009 of 26 June 2009 of the Prime Minister and the Minister for Public Works, Transport and Communications. Only after that date was it possible to put the annual budget into effect and begin drawing up the staff plan.

As provided for by Article 6 of Decree-Law 395/2007, the IMTT – Institute for Mobility and Transport, which acts as national railway safety authority (NSA), provided the necessary logistic support for GISAF to operate, notably installations and furniture.

It also loaned a used vehicle, from 1999, belonging to the now defunct INTF, which is naturally inadequate and not reliable enough for travelling to accident sites.

Until the end of 2009 the existing human resources were retained, namely the Director, a senior engineer belonging to the IMTT staff and an assistant engineer also on the IMTT staff.

At the end of 2009, the Order of 28/12/2009 of the Minister for Public Works, Transport and Communications approved the following staff plan for GISAF:

- 1 – DIRECTOR
- 3 – Senior Engineer (Accident Investigator)
- 2 – Assistant Engineer
- 1 – Operational Assistant

However, the provision of these posts is subject to specific rules of the Civil Service and the availability of funding in the annual budget.

For 2009 the GISAF annual budget was set at EUR 300 000.



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D – INVESTIGATION PROCEDURES

In 2009 the investigation procedures used were the same as those in the previous year, 2008, i.e.:

1. Information on occurrences received from operators or from the infrastructure manager (written or verbal), as per Article 8 of Decree-Law 394/2007.
2. Decision on measures to be taken according to the seriousness of the occurrence (opening of an investigation or not), as per Article 4(3) of Decree-Law 394/2007..
3. Appointment of an Investigating Committee and a lead investigator, as per Article 5 of Decree-Law 394/2007, and planning of periodic meetings of the Committee with GISAF to review the situation, follow up the work and inform the parties concerned (as per Article 10 of Decree-Law 394/2007).
4. Notification of the decision to set up the Investigating Committee to the infrastructure manager, operators, railway safety authority (IMTT) and the State Secretariat for Transport.
5. Collection of information on the circumstances surrounding the occurrence (human and material damage, rail traffic safety, etc.).
6. Survey of the site of the occurrence with the infrastructure manager – description of the circumstances surrounding the occurrence, photographic record, etc.
7. Identification and organisation of technical information to be requested from undertakings on rolling stock involved and infrastructure.
8. Scheduling of hearings involving the train crew and other witnesses.
9. Interviews.
10. Receipt and checking of technical data requested.
11. Identification of any additional information to be obtained from undertakings.
12. Drafting of the first version of the report on the occurrence, following the structure set out in Annex V to Directive 2004/49 of 29 April 2004.
13. Examination and discussion of the first version of the report and protection of the anonymity of persons involved in the accident or incident (Article 11(3) of Decree-Law 394/2007).
14. Introduction of amendments and signature of the final report.
15. Forwarding of final report as a preview to undertakings and other interested parties, as per Article 10 of Decree-Law 394/2007.
16. Analysis and validation of the observations made on the final report.



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17. Introduction of any amendments to the final report.
18. Approval of the final report by GISAF as per Article 11(4) of Decree-Law 394/2007.
19. Forwarding of the final report to the interested parties, the State Secretariat for Transport and ERA, for publication in its database.
20. Follow-up of recommendations, in cooperation with the Railway Safety Authority (IMTT).



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E – INVESTIGATIONS

The following investigations were opened in 2009 and concluded:

1. ERADIS DATABASE RECORD: PT-746; THE INVESTIGATION CONTINUED INTO 2010

Date	Type of accident	Place	Description	Consequences	Recommendations
8 July 2009, at 13:36	Collision with persons on open track	Sul do Tejo metro line, Casa do Povo station in Corroios	An elderly couple was struck by the metro train, travelling at approx. 54 km/h when they crossed the line at an unauthorised place.	1 fatality and 1 serious injury	<ol style="list-style-type: none">1. Redesign some bus stops next to the line to ensure passenger safety2. Improve signage for pedestrians3. Periodically prune bushes alongside the track to improve visibility

This accident did not satisfy the requirements of the Railway Safety Directive 49/2004 to be classed as a serious accident (Article 19(1)) and was therefore investigated under Article 21(6).



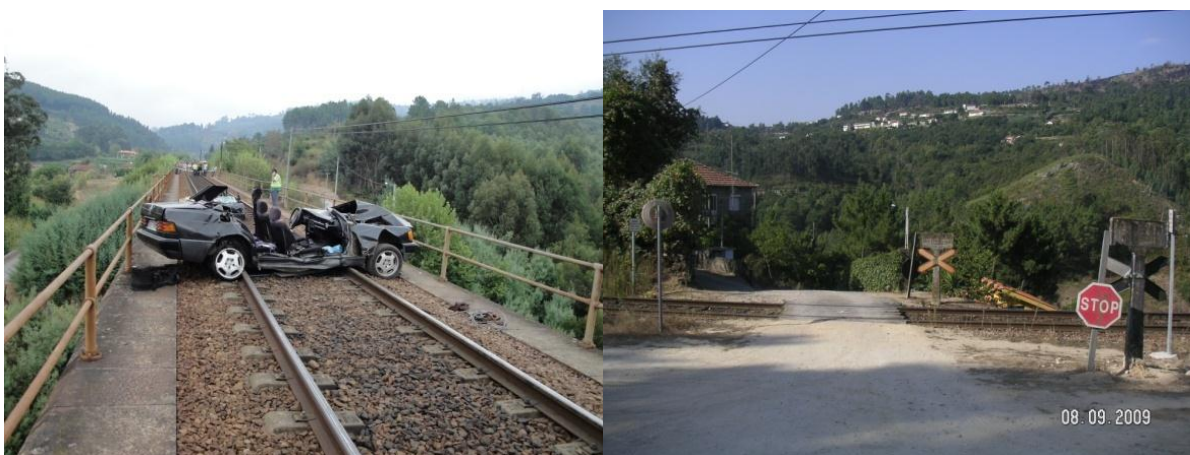


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2. ERADIS DATABASE RECORD: PT-757; THE INVESTIGATION CONTINUED INTO 2010

Date	Type of accident	Place	Description	Consequences	Recommendations
1 September 2009 at 05:55	Accident at category 5 level crossing	Douro Line, Ponte das Quebradas, Baião station	A Mercedes Benz 190D light vehicle, carrying 7 persons, failed to stop at a level crossing and was struck by regional train UTD 601, travelling at approx. 55 km/h. It was pushed almost 100 m, coming to rest on a bridge deck and catching fire momentarily.	6 fatalities and 1 serious injury, all occupants of the car. The fire was put out by the train crew.	<ol style="list-style-type: none"> No recommendation was made, as the car clearly failed to comply with the rules for using the level crossing. The existing road signs will be improved. This crossing was already due for removal under the national level-crossing elimination plan, subject to the availability of financial resources.

Despite the number of road-traffic victims, this accident did not satisfy the requirements of the Railway Safety Directive 49/2004 to be classed as a serious accident (Article 19(1)) and was therefore investigated under Article 21(6).





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F - ANALYSIS OF SERIOUSNESS

According to their seriousness, from the viewpoint of the railway, as defined in Article 3 of Directive 49/2004 and, in its transposition into domestic law, in Article 2 of Decree-Law 394/2007, the accidents were classified as follows:

Date	Type of accident and consequences	Place	Seriousness	Grounds
9 July 2009 at 13:36	Collision on open track, in urban environment. 1 fatality and 1 serious injury	Sul do Tejo metro line, after the Casa do Povo stop, as the metro was accelerating for an upgrade.	Accident as per the definition in Directive 49/2004; it did not have an impact on railway safety or the management of safety.	An elderly couple was heading for a bus stop on the other side of the avenue and had to cross the metro tracks at an unprotected place. After walking onto the railway track they were struck by the metro train which was travelling up the avenue at approx. 54 km/h. The presence of bushes may have reduced visibility for both parties. No change in the railway regulations or management is required. The need was identified to improve the layout of some bus stops next to the metro line.
1 Sept. 2009 at 05:55	Accident at category 5 level crossing	Douro line, Ponte das Quebradas, Baião station, at kp 68.108	Accident as defined by the Directive; despite the large number of victims, it did not have an impact on railway safety or the management	A light vehicle for five passengers, but carrying seven, crossed the level crossing without stopping and was struck by the train, travelling at approx. 55 km/h, on a section with a speed limit of 90 km/h. The car came to a stop on a bridge and did not derail the train. No change required to railway regulations or safety management.



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With reference to the following definition of a serious rail accident in Directive 49/2004:

“Serious accident” means any train collision or derailment of trains, resulting in the death of at least one person or serious injuries to five or more persons or extensive damage to rolling stock, the infrastructure or the environment, and any other similar accident with an obvious impact on railway safety regulation or the management of safety,

neither of the accidents described should be classed as a serious rail accident, as neither of them involved a serious failure with an obvious impact on railway safety regulation or the management of safety.



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G – CONCLUSIONS

The lack of an accident investigation team inevitably had an impact on the GISAF's working methods.

First, there was a need to train investigation teams composed of external experts only. The absence of GISAF investigators was mitigated to a certain extent by holding periodic meetings with the investigating teams to detect any deviation from the approach set out in the regulations, but did not jeopardise the independence of the investigation.

The lack of investigators also prevented us from processing the backlog of cases from 2005 to 2008.

The following cases are therefore awaiting processing and subsequent approval:

Opened in 2005 6 incomplete cases (before it was compulsory to notify ERA)
Opened in 2006 14 incomplete cases (notified to ERA)
Opened in 2007 11 incomplete cases (notified to ERA)
Opened in 2008 2 incomplete cases (notified to ERA)
Opened in 2009 2 incomplete cases; the investigations continued into 2010. All cases were notified to ERA.

Therefore, at the end of 2009, there were 35 incomplete investigations. Of these, excluding the six cases opened in 2005, 29 investigations, notified to ERA, were incomplete, awaiting final processing and approval.

H – INTERNATIONAL RELATIONS

EU railway legislation, notably the Railway Safety Directive 49/2004, provides for frequent contacts between the various accident investigating bodies (NIBs), at several levels, organised by the European Railway Agency (ERA). GISAF maintained this liaison by attending the most important meetings on accident investigation, held at the ERA premises in Lille and Valenciennes.

In addition to the plenary meetings for all NIBs, GISAF was also invited to take part in the restricted subgroup for organising the training of accident investigators.



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I – STATISTICAL DATA FOR ACCIDENTS INVESTIGATED IN 2009

2009			
Type of accident	Number of accidents or incidents investigated	Fatalities	Serious injuries
Collision (involving trains or an obstacle, except LCs)	0	0	0
Derailment	0	0	0
Accident at LC	1	6	1
Accident involving people and trains in motion	1	1	1
Fire on trains	0	0	0
Other	0	0	0
Total	2	7	2

LC = level crossing

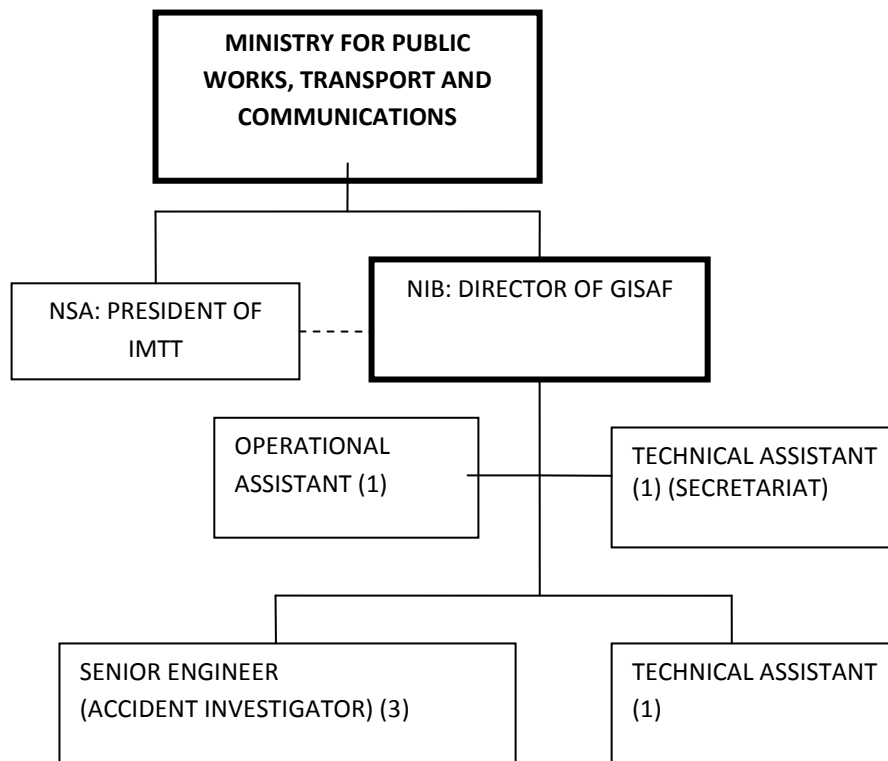
NOTE: The above data are not suitable for a statistical analysis since more accidents and incidents occurred but did not satisfy all the requirements for being investigated by GISAF.

For the purpose of analysing accident statistics, the only valid data are those published by the railway safety authority (NSA), IMTT.



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J – GISAF ORGANISATION CHART





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K - ANNEX – Investigations from previous years, opened but not yet concluded, which had to be notified to ERA from 2006, and were carried forward to 2009 and subsequently to 2010

DATE AND TIME OF OCCURRENCE	DESCRIPTION	NOTIFIED TO ERA; APPROVAL ORDER
CASES OPENED IN 2005		
14.01.2005	Accident on type D LC at KP 207.273 on the Beira Alta line with passenger train No 5427	No; D5/2009 of 29.10.2009; Case closed
1.03.2005	Accident on type D LC at KP 9.658 on the Vouga line with passenger train No 5105	No; D6/2009 of 30.10.2009; Case closed
03.06.2005 06:45	Accident on type B LC at KP 24.988 on Western line with train No 68361	No
16.08.2005 19:45	Runaway rolling stock and derailment on the Beira Baixa Line, with rolling stock coming to rest on L. III	No
11.08.2005 15:00	Accident involving mini-train run by Transpraia Lda	No
10.11.2005 10:27	Incident involving locomotives Nos 2506 and 2551 at Pampilhosa Station, Northern Line	No
07.11.2005 21:09	Minho Line, occurrence with personnel at Caminha Station	No
22.11.2005 16:52	Derailment of train No 75436 at Vila Franca das Naves Station, Beira Alta Line	No
TOTAL FROM 2005: six investigations not concluded, from before the ERA		



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registration procedure		
CASES OPENED IN 2006		
18/03/2006 17:20	Accident at automatic type B LC at kp 164.079, Western Line, involving a two-car diesel multiple unit	Yes
18.05.2006 16:12	Incident involving train No 3205 at type B LC at kp 100.762, Minho Line	Yes
04.07.2006 21:50	Derailment of goods train No 50331 at Pampilhosa Station, Northern Line	Yes
06.07.2006 11:25	Accident involving train No 128 at Miramar pedestrian crossing, Northern Line	Yes; PT-79
11.07.2006 10:17	Accident involving train No 5705 at kp 387.300, Algarve Line	Yes
15.07.2006 18:27	Derailment of goods train No 66590 at Pegões Station, Alentejo Line	Yes
10.08.2006 20:35	Accident involving train No 524, Northern Line	Yes
06.09.2006 04:35	Incident involving Tejo Energia coal train 66951, with destruction of axle box on seventh wagon, Northern Line, at kp 87.428	Yes
26.09.2006 19:13	Accident involving train No 4660 at kp 329.600, Northern Line, between Gaia and Valadares	Yes
25.10.2006 05:35	Incident involving goods train No 77351 at Tramagal Station, kp 129.500, Beira Baixa Line	Yes; PT-224
28.10.2006 14:30	Accident involving train No 6457 at type C LC at kp 170.418, Western Line	Yes



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07-11-2006 05:26	Accident involving train No 25625 at type B LC at kp 62.542, Beira Baixa Line	Yes
13.11.2006 21:55	Derailment of train No 51330 at Oliveira do Bairro Station, Northern Line	Yes
27.11.2006 19:05	Accident involving train No 60984 at category 5 LC at kp 37.969, Southern Line	Yes; D12/09 of 31.12.09; Case closed
15.12.2006 12:02	Accident involving train No 6454 at type B LC at kp 175.976, Western Line	Yes
20.12.2006 04:35	Derailment of 13th cement tank wagon due to a broken wheel at a speed of 90 km/h, between kp 235.140 and kp 238.412, Northern Line	Yes; D4/2009 of 29.10.09; PT-247; Case closed
TOTAL FROM 2006: 14 investigations not concluded, all notified to ERA		
CASES OPENED IN 2007		
01.02.2007 14:08	Accident at category 5 LC at kp 149.695, Beira Baixa Line, Fundão	Yes; PT-241
21.03.2007 18:41	Accident involving train No 133 at type A LC at kp 203.378, Northern Line	Yes
28.03.2007 16:50	Accident involving train No 803 at type B LC at kp 122.032, Western Line	Yes
04.04.2007 17:43	Accident involving train No 96509 at category 5 LC at kp 37.969, Southern Line	Yes
12.05.2007 17:30	Accident involving train No 6458 at type D LC at kp 143.998, Western Line	Yes
02.06.2007	Accident involving train No 4109 at type A LC	Yes



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15:31	at kp 59.270, Douro Line	
13.06.2007 01:40	Accident involving train No 77631 on track d at kp 218.190, Northern Line	Yes
01.08.2007 15:48	Accident involving train No 5679 at kp 140.650, Beira Baixa Line	Yes
05.08.2007 12:16	Accident involving train No 5714 at type B LC at kp 370.183, Algarve Line	Yes
17.08.2007 02:57	Derailment of train No 69611 at kp 231.300, Northern Line	Yes
18.08.2007 14:13	Accident involving train No 5718 at type D LC at kp 347.716, Algarve Line	Yes
TOTAL FROM 2007: 11 investigations not concluded. All cases were notified to ERA.		
CASES OPENED IN 2008		
11.03.2008 10:00	Accident involving passenger train No 800 at type A LC with half barriers, at kp 175.976, Western Line	Yes; PT-441
12.06.2008 20:15	Accident involving passenger train No 901 on type D LC at kp 69.446 on the Western line	Yes; PT-618
Only two investigations from 2008 were incomplete. They were notified to ERA.		
CASES OPENED IN 2009		
8.07.2009 13:36	Collision between a train in motion and persons, on open track in an urban environment, Sul do Tejo metro at Corroios, after the Casa do Povo stop	Yes; PT-746; the investigation continued into 2010



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1.09.2009 5:55	Accident at category 5 LC, kp 68.018 on the Douro line, on Ponte das Quebradas, Baião	Yes; PT-757; the investigation continued into 2010
The investigations opened in 2009 were carried forward to 2010 and continued. They were notified to ERA.		

Lisbon, 30 September 2010

Director of GISAF

Victor Risota