



**ROMANIAN RAILWAY  
INVESTIGATING BODY  
- OIFR -**

**ANNUAL REPORT  
2013**



Until 2006 the events and accident causes in the railway and metro transport in Romania were the subject of the inquiry commissions set up for this purpose in accordance with the existing legislation, the Instructions for the prevention and investigation of the railway events and accidents – no. 003, approved by the Transport Minister's Order no. 210/14.03.2000 and the Instructions for the prevention and investigation of the subway events and accidents – M 003 approved by the Public Works, Transport and Housing Minister's Order no. 1852/11.01.2002.

Accession to the European Union required the establishment of a regulatory framework based on railway safety to meet the common requirements of the EU Member States.

In Romania, the harmonization of the railway safety legislation, with the European Community legislation, was achieved with the implementation of the Directive 2004/49/EC of the European Parliament and of the Council, through the development and issuing by the Romanian Parliament of Law 55/2006 on railway safety, promulgated by President of Romania Decree no 315/15.03.2006.

Through this Law the Romanian Railway Authority – AFER was reorganized, Romanian Railway Investigating Body was established as independent body within the Romanian Railway Authority, the tasks were established and the railway accidents and incidents investigation activity was regulated.

In order to regulate the development of the investigation of accidents and incidents according to the provisions of Law no. 55/2006, it was necessary the development and adoption by Decision of Romanian Parliament of a normative act to regulate this activity and to abrogate the Transport Minister's Order no. 210/14.03.2000 on the approval of the Instructions for the prevention and investigation of the railway events and accidents – no. 003 and Public Works, Transport and Housing Minister's Order no. 1852/11.01.2002 of the approval of the Instructions for the prevention and investigation of the subway events and accidents – M 003.

On 17.02.2010 was adopted the Romania Government Decision no. 117/2010 on the approval of Regulation for the investigation of the railway accidents and incidents, the development and improvement of the railway safety on Romanian railway and subway network, normative act that came into force on 01.05.2010.

The Regulation for accidents and incidents investigation, for development and improvement of the railway safety on Romanian railway and subway network addresses to the whole spectrum of railway undertakings that develop operations of railway or subway transport:

- a) administrator/administrators of railway infrastructure;
- b) noninteroperable railway infrastructure's managers;
- c) railway undertakings;
- d) railway undertaking that perform transport operations with the subway;
- e) railway undertakings that hold in property, leasing or with rent, industrial branches connected at the public railway infrastructure and/or at the private railway infrastructure opened to the public traffic;
- f) railway undertakings that hold in property, leasing or with rent, railway vehicle that run on the railway infrastructure;
- g) railway undertakings that develop activities related to the railway transport.

**Within this report the Romanian Railway Investigating Body is presented, the role and purpose for its establishment, its organization and the activity carried out during 2013.**

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## 1. PRESENTATION OF ROMANIAN RAILWAY INVESTIGATING BODY

Romanian Railway Investigating Body was established for the investigation of the serious railway accidents, its objective being the improvement of the railway safety and accidents prevention.

Romanian Railway Investigating Body was organized and functioning according to the provisions of Law no.55/16<sup>th</sup> of March 2006 concerning the railway safety (through which was transposed the Directive 2004/49/CE of European Parliament and Council) and of the Government Decision no.1561/01<sup>st</sup> of November 2006 for the amendment of the Government Decision no.626/1998 concerning the organization and the operation of Romanian Railway Authority- AFER, being an independent and permanent body within the Romanian Railway Authority- AFER.

Romanian Railway Investigating Body is functionally independent from Romanian Railway Safety Authority and from any railway regulation authority. Also Romanian Railway Investigating Body is independent in its organization, legal structure and decision-making from any infrastructure manager, railway undertaking, charging body, allocation body and notified body and any interested party whose networks may conflict with the tasks entrusted Romanian Railway Investigating Body.

Romanian Railway Investigating Body has the obligation to investigate the serious railway accident and also, it can investigate those accidents and incidents which under slightly different conditions could lead to serious accidents, including the technical failures of the structural subsystems or of the interoperability constituents to high speed railway systems or European conventional.

Romanian Railway Investigating Body fulfills its tasks independently by any infrastructure manager, railway undertaking, charging body, allocation body and notified body and has the necessary resources for this. Investigators enjoys by a complete independence in carrying out the investigating tasks.

Romanian Railway Investigating Body may carry out other tasks set by Government Decision about the investigation of other events than railway accidents and incidents, insofar as, those investigations do not endanger its independence.

### 1.1 National legislation and the level of the Safety Directive implementation

The Directive 2004/49/CE of European Parliament and Council was transposed in Romania by the Law no. 55/16<sup>th</sup> of March 2006 concerning the traffic safety, which entered into force on 13<sup>rd</sup> April 2006.

Safety Directive implementation was achieved through the Government Decision no. 117/02<sup>nd</sup> of March 2010 through which was approved the Regulation for the investigation of the railway accidents and incidents, the development and improvement of Romanian railway safety and were cancelled the Ministry of Transport's Orders no.210 from the 14<sup>th</sup> of March 2000 concerning the approval of the Instructions for the prevention and investigation of the railway accidents and events – 003 and the Ministry of Transports, Public Works and Housing no.1852 from the 11<sup>th</sup> of January 2002 for the approval of the Instructions for the prevention and investigation of the subway events and accidents – M 003.

### 1.2 Role and purpose

Romanian Railway Investigating Body became operational on the 1<sup>st</sup> of March 2007 when its organizational structure was approved by the Ministry of Transport's Order no.373/1<sup>st</sup> of March 2007.

#### The role of Romanian Railway Investigation Body

The role of Romanian Railway Investigation Body is to develop railway accidents/ incidents investigating actions and make analyzes and studies on the causes and circumstances that led at its occurrence. Romanian Railway Investigation Body can also perform other tasks established by

Government Decision about the investigation to the other events than railway accidents and incidents.

According to the provisions of the Safety Directive, Law no. 55/2006 concerning the traffic safety and of the Government Decision no.117/02<sup>th</sup> of March 2010 through which was approved the Regulation for the investigation of the railway accidents and incidents, for development and improvement of Romanian railway safety, Romanian Railway Investigation Body taking into account in its decision the next:

- the gravity of the accident or the incident;
- if is part of a series of relevant accident or incidents for the whole system;
- its impact to railway safety at the community level;
- request of the infrastructure administrator, railway undertakings, Romanian Railway Authority- AFER or of other EU member states.

Romanian Railway Investigation Body does not investigate:

- railway accidents/incidents which are not relevant for the system of railway;
- cases of suicide.

### Purpose

The aim pursued by Romanian Railway Investigating Body through the investigating actions of the railway accidents and incidents is to improve the railway safety and to prevent similar accidents or incidents.

This is achieved by safety recommendations set out by the inquiry commission members and are found in the investigation report structure.

Romanian Railway Investigating Body does not investigate those accidents which falls outside the goal.

## **1.3 General data**

### The staff at the end of 2013

Within OIFR operates a total of 25 employees, of which:

- 1 director;
- 1 chief investigator;
- 3 compartments coordinators;
- 14 investigators;
- 2 psychologists;
- 4 employees with administrative tasks.

### The budget allocated

In 2013, for the activity, OIFR had a budget of 2.567.000 lei.

## **1.4 Organization**

By Minister of Transport and Infrastructure Order no.2191/05.12.2012, Romanian Railway Authority and Romanian Railway Notified Body organizational structures were modified.

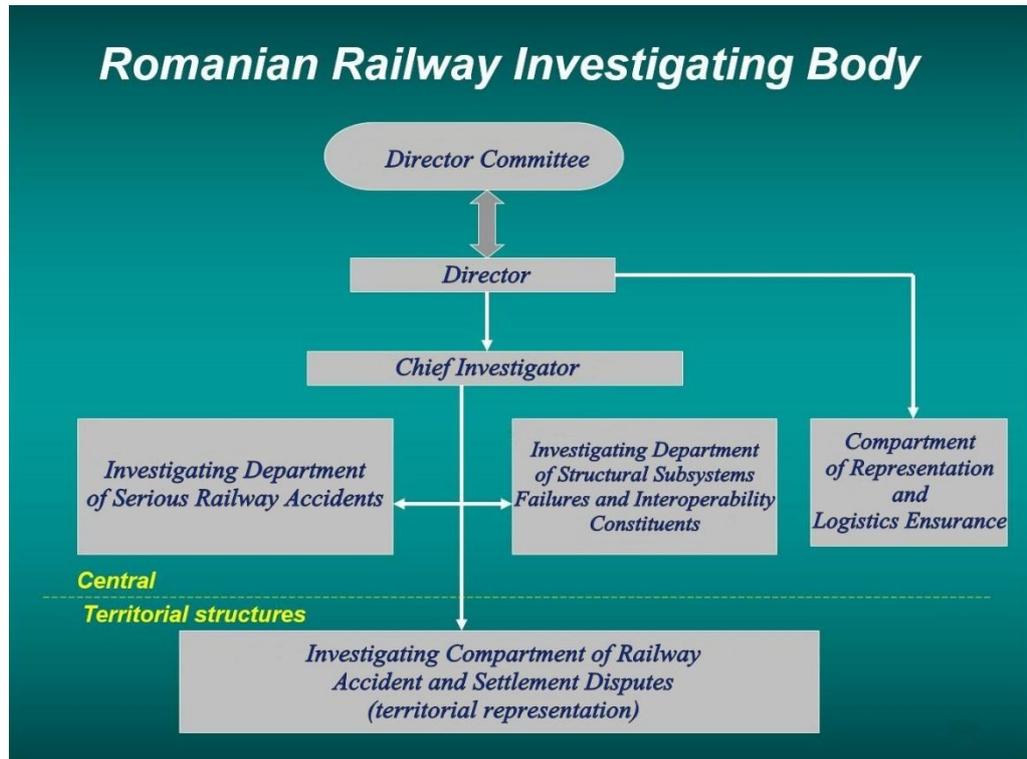
This was achieved by setting up Compartment of Representation and Logistics Ensurance subordinated to the Director of Romanian Railway Investigating Body, RRIB organizational structure was modified accordingly.

The establishment of this compartment has become a necessity to separate the investigating activity itself from other related activities that include:

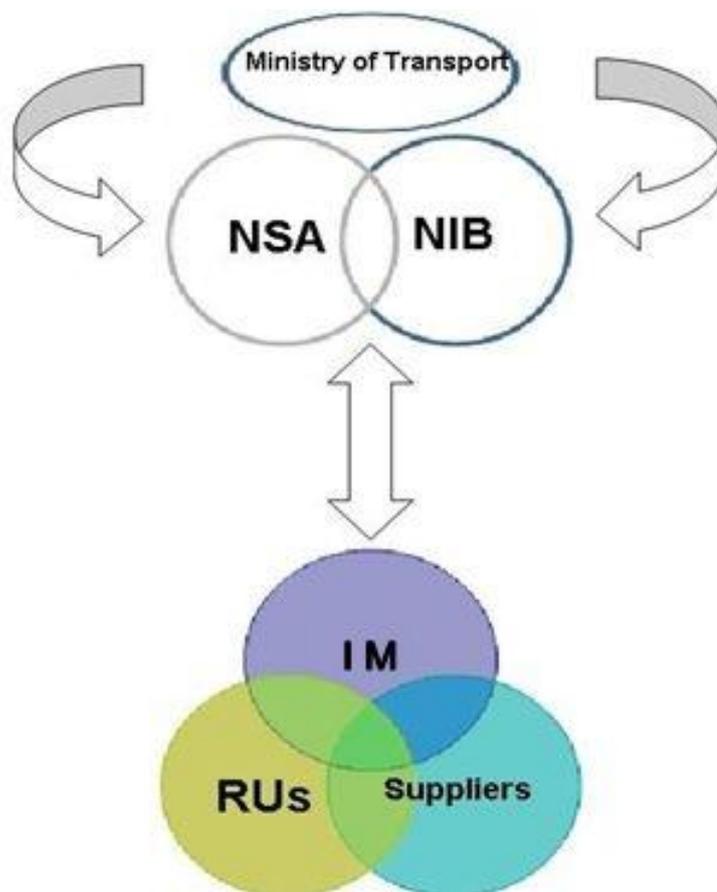
- setting up an archive of events endorsed by RRIB and its management;
- archive all investigation files;
- continuously update of ERAIL database with investigated accidents, developed by the European Railway Agency;
- providing logistics for body activity under conditions imposed by legislation in force.

This was the context in which the Compartment of Representation and Logistics Ensurance was established.

The current organizational structure is presented in the following figure:



**1.5 Organizational flow**



## 2 INVESTIGATION PROCESS

The investigation aims to prevent the accidents and incidents and includes gathering and analyzing of the information, establishment of the conditions, including the determination of the causes and, if case, the issuing of some safety recommendations.

The investigation is from the legal point of view an administrative act, allowing the main investigators to fulfill their tasks as efficiently as possible and as soon as possible. The investigation is independent of any legal investigation. The investigation does not handle in any way the establishment of the degree of guilt or the responsibility.

The result of an accident or incident investigation is part of the investigation report prepared according with the seriousness of the accident or incident.

The report presents the investigations objectives and includes, if case, safety recommendations.

Before the drawing up of the investigation report ( the final investigation report) one works out a draft report, that according to the provisions of the art 22(3) of the Law 55/2006 is submitted to the infrastructure administrator, involved railway undertakings, Romanian Railway Safety Authority, victims and their relatives, owners of the damaged goods, manufacturers, involved emergency services and the representatives of the staff and the users in to order to inform them about the investigation and its course and to give them the possibility to present their opinions on the investigation and to make comments on the information of the report draft.

If Romanian Railway Investigating Body considers that the opinions and comments are relevant for the investigation, the investigation report is change accordingly.

After its ending, the investigation report is submitted to management Romanian Railway Investigating Body for the approval and publishing on Romanian Railway Investigating Body site.

### 2.1 Investigated cases

During 2013 the Romanian Railway Investigating Body, taking into account the seriousness of the railway accidents/incidents, including technical failures of the structural subsystems of railway happened on Romanian railway and subway network and their impact on the railway safety, according to the provisions of the art. 19(1) and (2) of the Law no.55/2006 concerning the railway safety, considered necessary to start 41 investigative actions.

From these in 2013, 29 investigations were finished, 12 have been finished during 2014.

In 2013, 10 investigations were finished that started between September- December 2012, so the total number of investigations completed in 2013 was 39.

- investigations started in 2012 – finished in 2013	= 10
- investigations started in 2013 – finished in 2013	= 29
- <u>investigations started in 2013 – finished in 2014</u>	<u>= 12</u>
<b>Total investigations performed in 2013</b>	<b>= 51</b>
<b>Investigations finished in 2013</b>	<b>= 39</b>
- serious accidents	= 0
- accidents	= 22 in which
• collisions	= 0
• derailments	= 18
• fires	= 4
- incidents	= 17
- technical failure of the structural subsystems or of interoperability constituents	= 0

The publishing length of the investigations did not exceed 12 months, stipulated in the Law no. 55/2006, concerning the traffic safety and the provisions of the Regulation for the accident and

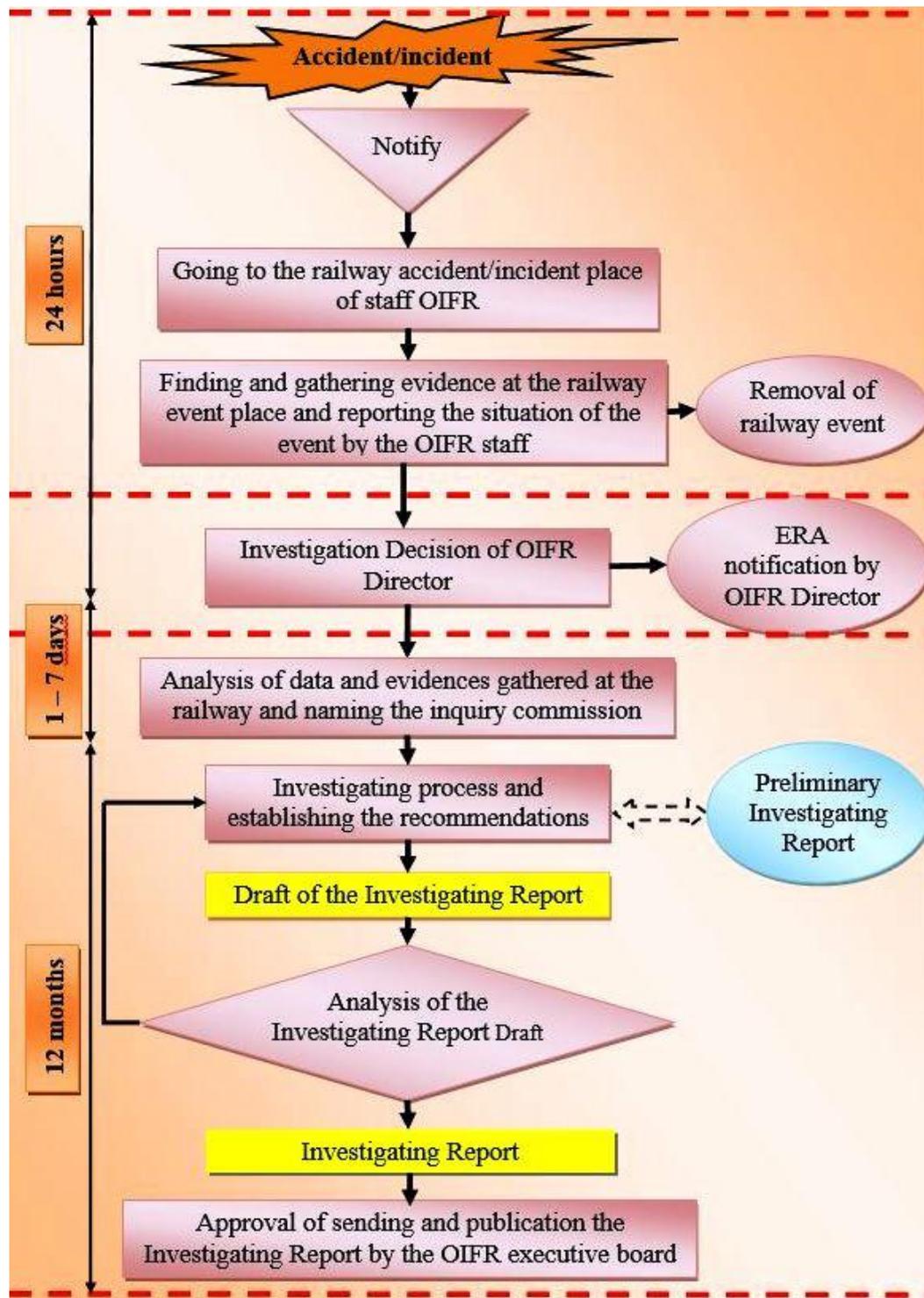
incident investigation, development and improvement of railway safety on Romanian railway and subway transport network.

## 2.2 Institutions involved in the investigation (currently or exceptionally)

From its establishment until now, in the investigations Romanian Railway Investigating Body cooperated with the authorities in charge with the legal inquiry, as well as with other authorities responsible with the interventions at the accident/incident place.

According to the provisions of the art.20, paragraph 4 of the Law no.55/2006 concerning the railway safety, in the investigations, Romanian Railway Investigating Body can use, if necessary, specialist from related fields. During 2013 was not necessary to apply the provisions of this article, investigative actions carried no need to call on specialists in related fields.

## 2.3 Investigation process



### 3 INVESTIGATIONS

#### 3.1 General overview of the concluded investigations in 2013 comparative with 2012, identification of the main tendencies.

Type of accidents investigated in 2013 <sup>(1)</sup>	Number of accidents	Number of victims		Damages (lei)	Damages (€)	The trend compared with 2012
		Deaths	Seriously injured			
Train collisions	0	-	-	0	0 €	0 (0%)
Train derailments	18	-	-	958.213,33	216.392,71 €	-2 (-11%)
Hits of road vehicles	0	-	-	0	0 €	-1 (-100%)
Rolling stocks fires	4	-	-	245.805,09	55.032,75 €	+2 (+50%)
<b>TOTAL</b>	<b>22</b>	<b>-</b>	<b>-</b>	<b>1.204.018,42</b>	<b>271.425,46 €</b>	<b>-1 (-5%)</b>
<b>Total damages in euro (about)</b>						

<sup>(1)</sup> it was considered the year when the investigation was completed;

#### 3.2. Concluded and started investigations in 2013

In 2013 Romanian Railway Investigating Body concluded and published 39 investigation reports (10 were investigations initiated on September – December 2012) and initiated the investigation procedure for 12 cases for which the investigation actions that were undertaken in 2013 were completed in 2014.

In the table below are shown the investigations and the legal basis for their carrying out, taking into account the requirements of the European Directive on the railway safety and the national legislation.

#### Concluded investigations in 2013

No.	The date of occurrence	Description	Legal basis of the investigation	Concluding date
1	02.09.2012	On the activity area of “ Regional Center of Operation, Maintenance and Railway Repairs” București, hereinafter CREIR, <b>in the railway station Bucureștii Noi</b> , occurred the derailment of the first two axles from the locomotive EA 526 hauling the freight train no.84796-1 belonging to railway transport operator SNTFM „CFR Marfă” S.A..	<b>i</b>	11.02.2013
2	28.09.2012	On the activity area of CREIR Craiova, <b>in the railway station Târgu Jiu</b> , occurred the derailment of the first axle in the running direction from the locomotive ED 030 (cold locomotive), the first after the hauling	<b>i</b>	15.01.2013

		locomotive (EA 830) of the freight train no.84790 belonging to the railway transport operator SNTFM „CFR Marfă” S.A..		
3	02.10.2012	On the activity area of CREIR Craiova, <b>between the railway stations Popești-Vâlcea and Copăceni</b> , occurred the derailment of the first axle from the locomotive DA 1636, the second in the train composition (cold locomotive) at the train no.39237 belonging to the railway transport operator SERVTRANS INVEST.	i	07.02.2013
4	12.10.2012	On the activity area of CREIR Brașov, running section Sâncel – Praid (non-electrified single line – non-interoperable section managed by S.C. RC-CF Trans S.R.L. Brașov), <b>between the railway stations Praid and Sovata</b> , occurred the derailment on the wagons no.33876735928-8 and no.31555972485-3 from the freight train composition no.99962 belonging to the railway transport operator S.C. Rail Force S.R.L..	i	17.01.2013
5	28.10.2012	On the activity area of CREIR Timișoara, running section Berzovia – Gătaia (non – electrified single line – non-interoperable section managed by S.C. RC-CF Trans S.R.L. Brașov), <b>in the railway station Gătaia</b> , in the passenger train running no.14446 (belonging to the railway transport operator S.C. REGIOTRANS S.R.L. Brașov), occurred the derailment of both bogies from the motorized train AMX no.577.	i	21.02.2013
6	12.11.2012	On the activity area of CREIR Timișoara, running section Livezeni – Lupeni (electrified - single line – non-interoperable section managed by S.C. RC-CF Trans S.R.L. Brașov), <b>between the railway stations Lupeni Tehnic and Vulcan</b> , in the freight train running no.23815 (belonging to SNTFM „CFR Marfă” S.A.), occurred the derailment of the last 4 wagons from the train composition.	i	12.02.2013
7	06.12.2012	On the activity area of CREIR Constanța, <b>in the railway station Fetești</b> , the disposing station movements inspector handled incorrectly the switches 14/28 from the railway station while the dispatching of the train Inter Regio 1681 (switches in dispatch position for the train no.1681 – train belonging to SNTFC CFR Călători S.A.).	i	16.01.2013
8	22.12.2012	On the activity area of CREIR Timișoara, running section Simeria - Livezeni (electrified double line), <b>in the railway station Pui</b> , occurred the derailment of a bogie from the wagon no.88536656800-8 from the freight train consist no.50408 (belonging to the railway	i	21.02.2013

		transport operator S.C. UNIFERTRANS S.A.), over switch no.15 within the railway station.		
9	22.12.2012	On the activity area of CREIR Iași, running section Iași – Pașcani, <b>between the railway stations Ruginoasa and Târgu Frumos</b> , in the freight train running no.61723-2 (SNTFM „CFR Marfă” S.A.) the maximum permissible speed was exceeded.	i	10.07.2013
10	30.12.2012	On the activity area of CREIR Timișoara, <b>in the railway station Petroșani</b> , in the freight train running no.20976-1 (belonging to S.C. Cargo Trans Vagon S.A.), occurred the derailment of an axle from the wagon no.33535300809-7 .	i	16.05.2013
11	05.02.2013	On the activity area of CREIR Craiova, running section Băbeni – Alunu (non-interoperable section belonging to SC RC-CF Trans SRL Brașov - non-electrified single line), <b>in the railway station Copăceni</b> , occurred the derailment of the first bogie in the running direction from the 7th wagon (empty wagon) from the freight train consist no.23683 (belonging to the railway transport operator SNTFM „CFR Marfă” S.A.).	i	17.04.2013
12	14.02.2013	On the activity area of CREIR Galați, <b>between the railway station Racordare CS Galați and Cătușa</b> , current line at km 3+480, in the freight train running no.76052 (belonging to the railway transport operator SNTFM „CFR Marfă” S.A.), occurred a fire at the locomotive DA L 1069.	i	26.04.2013
13	18.02.2013	On the activity area of CREIR Constanța, running section Capu Midia - Dorobanțu (non-interoperable section belonging to S.C. GFR S.A. - non-electrified double line), <b>in the railway station Năvodari</b> , occurred the derailment of the first bogie in the running direction from the wagon no.33877852335-1 (the first from the locomotive) from the freight train consist no.89614 belonging to the railway transport operator S.C. GFR S.A..	i	09.05.2013
14	12.03.2013	On the activity area of CREIR Cluj, <b>the railway station Măgheruș Șieu</b> , in the train running no.14016, consist from AMX 97-1702-6 and trailer vehicle 74-1702-0 belonging to the passenger railway transport operator S.C. Regiotrans S.R.L. Brașov, occurred the derailment of a bogie from the trailer vehicle.	i	15.04.2013
15	14.03.2013	On the activity area of CREIR Timișoara, <b>railway station Căvâran</b> , in the freight train running no.91718, belonging to the freight transport operator SNTFM „CFR Marfă” S.A. occurred the derailment of a bogie from the 9th	i	17.06.2013

		wagon from the rear of the train.		
16	07.04.2013	On the activity area of CREIR București, <b>in the railway station Târnavele</b> , one passed the exit signal Y2, ordering stop, by the freight train no.29902, hauled by DA 751 belonging to S.C. Cargo Trans Vagon S.A.	i	26.04.2013
17	07.04.2013	On the activity area of CREIR Timișoara, <b>between the railway stations Baru Mare and Pui</b> , in the freight train running no.60832-1, belonging to the freight transport operator S.C. Transferoviar Grup S.A. occurred the derailment of a bogie from the 5th wagon from the rear of the train.	i	18.07.2013
18	17.04.2013	On the activity area of CREIR Craiova, <b>between the railway stations Copăceni and Popești</b> , in the freight train running no.23682, belonging to the freight transport operator SNTFM „CFR Marfă” S.A. occurred the derailment of two wagons from the train consist.	i	02.07.2013
19	03.05.2013	On the activity area of CREIR București, <b>between the railway stations Fusea and Mătășaru</b> , in the freight train running no.71734, belonging to the freight transport operator SNTFM „CFR Marfă” S.A. occurred a fire at the locomotive DA 1362.	i	10.06.2013
20	01.05.2013	On the activity area of CREIR Constanța, <b>in the railway station Agigea Nord</b> , in the freight train running no.20900, belonging to the freight transport operator S.C. Cargo Trans Vagon S.A, occurred the derailment of two wagons (the second axle from the first bogie from the first wagon and the first bogie from the second wagon).	i	10.06.2013
21	17.05.2013	On the activity area of CREIR Craiova, in the passenger train running no.9006 belonging to the passenger transport operator SNTFC „CFR Călători” S.A., after stopping in the <b>railway station Milcov</b> , the train started without the engine driver.	i	18.06.2013
22	22.07.2012	On the activity area of CREIR Timișoara, <b>in the railway station Băile Calacea</b> , one passed the station limit while backing-into-siding operation a rake of 26 wagons, from line no.2 to line no.1.	i	28.08.2013
23	01.07.2013	On the activity area of CREIR Craiova, <b>in the railway station Ionești</b> , the freight train no.39618 belonging to DB SCHENKER RAIL ROMÂNIA S.R.L. passed at danger the exit group signal no.1.	i	18.07.2013
24	04.07.2013	On the activity area of CREIR Cluj, <b>in the railway station Tășnad</b> , one passed at danger the exit signal, by the train no.69835-2. The	i	25.07.2013

		train was hauled by locomotive DA 412 belonging to S.C. Transferoviar Grup S.A.		
25	06.07.2013	On the activity area of CREIR Timișoara, <b>railway station Iliia</b> , in the freight train running no.48420-1, belonging to the freight transport operator SNTFM „CFR MARFĂ” S.A., occurred a fire at the hauling locomotive EA 551.	i	13.09.2013
26	09.07.2013	On the activity area of CREIR Craiova, <b>railway station Drobeta Turnu Severin Mărfuri</b> , in the freight train running no.97583 (composed from the locomotives EA 222 and EA 867), belonging to the freight transport operator SNTFM "CFR MARFĂ" S.A., occurred a fire at the locomotive EA 222.	i	29.08.2013
27	10.07.2013	On the activity area of CREIR Timișoara, <b>in open line between the railway stations Armeniș and Teregova</b> , on all train length km 446+650 to km 447+100 occurred the breakdown of the superior connections to earth and the pulling of the protection of the tunnel refuge by the rolling stock in motion.	i	12.08.2013
28	20.07.2013	In the range of activity of CREIR Craiova, at the exit of the <b>railway station Rosiori Nord</b> , in the running of the freight train no.83216, belonging to the railway freight transport operator SNTFM „CFR MARFA” S.A. occurred the derailment of the 4 <sup>th</sup> wagon from the rear of the train of both bogies.	i	27.11.2013
29	29.07.2013	In the range of activity of CREIR Timisoara, <b>between the railway station Banita and Petrosani</b> , in the running of the freight train no. 29922, belonging to the railway freight transport operator CARGO TRANS VAGON S.A. occurred the derailment of the 7 <sup>th</sup> wagon by the first axle of the second bogie in the running direction.	i	25.09.2013
30	07.04.2013	In the range of activity of CREIR Craiova, <b>traffic section Craiova - Prunișor</b> , it was exceeded the maximum running speed on a distance of 345 m by the locomotive EA 732 (belonging to the engine depot Timisoara), which run with the speed of 123 km/h instead of 120 km/h, speed found at the reading of the speedometer.	i	23.08.2013
31	03.08.2013	In the range of activity of CREIR Craiova, <b>in the railway station Filiași</b> , was wrongly performed the exit route for the train no. 2021 (in direction Tantareni instead of Gura Motru).	i	23.08.2013
32	10.08.2013	In the range of activity of CREIR Cluj, <b>the railway station Dej Triaj</b> , in the area of switch no.23A, in the running of the freight train no.50451, belonging to the railway freight	i	23.08.2013

		transport operator S.C. UNICOM TRANZIT S.A., occurred the derailment of all axles from the 16 <sup>th</sup> wagon from the locomotive.		
33	18.05.2013	In the range of activity of CREIR Braşov, <b>between the railway stations Mureni and Beia</b> , it was exceeded the maximum speed admitted by the line by the trains no. R3510 and no.R3500, belonging to the railway passenger transport operator SNTFC "CFR CALATORI" S.A.	i	08.10.2013
34	25.08.2013	In the range of activity of CREIR Braşov, in the <b>railway station Valea Lungă</b> , were hit and bend: the RX4 repetitive signal and the X4 exit signal by the open door of wagon no.315354716377, 10 <sup>th</sup> from the freight train no.32602 (belonging to the railway freight transport operator SNTFM CFR „Marfa” S.A.).	i	17.10.2013
35	11.10.2013	In the range of activity of CREIR Craiova, in the <b>railway station Işalniţa</b> , the freight train no.61716 (belonging to the railway freight transport operator SNTFM CFR „Marfa” S.A.) was detected with an uninsured braked weight percentage.	i	04.11.2013
36	16.10.2013	In the range of activity of CREIR Craiova, in the <b>railway station Slatina</b> , the driver of the passenger train no.9476 (belonging to the railway passenger transport operator SNTFC CFR CALATORI S.A.) departed from the station on the permissive indication of the exit signal, before the exterior movement inspector could give the signal „start the train” and without that the conductor could be on the train.	i	20.12.2013
37	01.10.2013	In the range of activity of CREIR Timişoara, on the current line between <b>the railway stations Ronaţ Triaj H. - Ronaţ Triaj Group D</b> , on a distance of 884 m, the train Regio no. 2601, hauled with the locomotive EC 040 (belonging to the engine depot Timişoara) run with the speed of 90 km/h, exceeding the maximum running speed of the line (80 km/h). The exceeding of the maximum running speed of the line was found out after the reading and the interpretation of the information recorded in the IVMS file of the locomotive.	i	15.11.2013
38	26.10.2013	In the range of activity of CREIR Braşov, <b>between the railway stations Predeal and Timişul de Sus</b> , it was exceeded the maximum running speed provided in the timetable of the freight train no.91742-1 belonging to the railway freight transport operator SNTFM CFR MARFA S.A.	i	29.11.2013
39	25.11.2013	In the range of activity of CREIR Galaţi, in the <b>railway station Cireşu</b> , at passing of the	i	12.12.2013

	freight train no.80518, belonging to the railway freight transport operator S.C. GRUP FERVIAR ROMAN S.A., were hit 4 catenary supports by the open door of the 15 <sup>th</sup> wagon from the locomotive.		
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(1) **The legal basis of the investigation:** i = In accordance with the Safety Directive, ii = The National legal basis (covering possible areas excluded by Article 2, paragraph 2 of the Safety Directive), iii = Optional - other criteria (National rules / regulations to which the Safety Directive makes no reference).

#### Investigation started in 2013 and finalized in 2014

No. crt.	Occurrence date	Description	The legal base of the investigation	Finalization date
1	02.02.2013	In the range of activity of CREIR Timișoara, the traffic section Simeria - Livezeni (electrified, double line), in the <b>railway station Pui</b> , occurred the derailment of the last 2 wagons from the freight train no.23817 (belonging to the railway freight transport operator SNTFM „CFR Marfa” S.A.), due the breaking of the wheel membrane from wheel no.2 of the wagon no.815366558758 (wagon equipped with cast wheels).	i	21.01.2014
2	08.05.2013	In the range of activity of CREIR Cluj, <b>between the railway station Fiad and Telciu</b> , in the running of the freight train no.43622, belonging to the railway freight transport operator SNTFM "CFR MARFA" occurred the derailment of 9 wagons loaded with logs (3 overturned wagons and 6 derailed wagons).	i	07.04.2014
3	02.09.2013	In the range of activity of CREIR Cluj, <b>between the railway stations Suplacu de Barcău and Șimleu Silvaniei</b> , km. 53+500, in the running of the freight train no. 89435, belonging to the railway freight transport operator S.C. GRUP FERVIAR ROMAN S.A., occurred the derailment of wagon no.335379915549, by the first bogie in the running direction.	i	16.01.2014
4	24.09.2013	In the range of activity of CREIR Galați, in the running of the freight train no.76059, belonging to the railway freight transport operator SNTFM „CFR MARFA” S.A., in the <b>railway station Cătușa</b> , at the passing over the centralized switch no.6, occurred the derailment by a bogie of the rear wagon from the train.	i	09.01.2014
5	27.09.2013	In the range of activity of CREIR Cluj, in the running of the freight train no.89441, belonging to the railway freight transport operator SC Grup Feroviar Roman S.A., at passing on <b>line III from the railway station Reteag</b> , occurred the derailment of the second wagon from the locomotive by the first bogie, in the running	i	13.01.2014

		direction of the train.		
6	04.10.2013	In the range of activity of CREIR Cluj, <b>between the railway stations Suplacu de Barcau and Simleu Silvaniei</b> (non interoperable section belonging to S.C. APRIA S.R.L.), km.53+730, in the running of the freight train no.89401, belonging to the railway freight transport operator SC Grup Feroviar Roman S.A., occurred the derailment of the 18 <sup>th</sup> wagon from the train, by the first bogie in the running direction.	i	19.02.2014
7	16.10.2013	In the range of activity of CREIR Cluj, <b>between the railway stations Monor Gledin and Rapa de Jos</b> , km.33+300, occurred the catching up and hitting of the last wagon from the freight train no.50473-2 (belonging to the railway freight transport operator S.C. Unicom Tranzit S.A.) by the train no.48924 (tower wagon DP 58 belonging to LC District Saratel), which run between the railway stations Saratel - Rapa de Jos. After the impact occurred the derailment of the tower wagon by the second axle in the running direction and the wounding of 16 persons which were on the tower wagon.	i	03.03.2014
8	21.11.2013	In the range of activity of CREIR Craiova, <b>between the railway stations Valea Alba and Balota</b> , at km 347+200, in the running of the freight train no.31710, belonging to the railway freight transport operator SNTFM „CFR Marfa” S.A., occurred the derailment by a bogie of the 8 <sup>th</sup> wagon from the locomotive.	i	31.01.2014
9	02.12.2013	In the range of activity of CREIR Craiova, <b>between the railway stations Zlatarei and Dragasani</b> , at km 234+800, occurred a fire at the locomotive DA 875 of the freight train no.22002-1, belonging to the railway freight transport operator SNTFM „CFR MARFA” S.A.	i	24.02.2014
10	04.12.2013	In the range of activity of CREIR Braşov, <b>between the railway stations Praid and Sovata</b> (non interoperable line belonging to S.C. RC-CF TRANS S.R.L. Brasov), at the level crossing at km 109+410, foreseen with road sign IR and mechanical barriers, occurred the hitting by the auto no.AG-87-BCE of the diesel multiple unit no.4503, which run as passenger train no.14630, belonging to the railway freight transport operator S.C. REGIOTRANS S.R.L.	i	30.06.2014
11	09.12.2013	In the range of activity of CREIR Craiova, <b>between the railway stations Valea Albă and Balota</b> , km 347+230, in the running of the freight train no.30650, belonging to the railway freight transport operator DB SCHENKER RAIL ROMANIA S.R.L., occurred the derailment of two wagons, respectively the 5 <sup>th</sup> wagon from the	i	05.03.2014

		locomotive by all axles and of the 6 <sup>th</sup> wagon from the locomotive by the second axle in the running direction.		
12	21.12.2013	In the range of activity of CREIR Braşov, <b>between the railway stations Mureni and Vanatori</b> , line I, km.282+600, in the running of the freight train no.32603, belonging to the railway freight transport operator SNTFM „CFR Marfa” S.A., occurred the derailment of the locomotive 745 which hauled the train, by the first axle in the running direction.	i	19.03.2014

(1) **The legal basis of the investigation:** i = In accordance with the Safety Directive, ii = The National legal basis (covering possible areas excluded by Article 2, paragraph 2 of the Safety Directive), iii = Optional - other criteria (National rules / regulations to which the Safety Directive makes no reference).

### 3.3. Research studies (or safety studies) ordered and completed in 2013

#### Studies ordered and completed in 2013

Order date	Study name (type, location)	Basis for legislation	Additional data
03.09.2013	Laboratory tests for the monobloc wheel no.2, broken from the wagon no.81536655875-8, involved in the railway accident from the 02 <sup>nd</sup> of February 2013, on the traffic section Simeria - Petrosani	ii	28.11.2013

(1) **The legal basis of the investigation:** i = In accordance with the Safety Directive, ii = The National legal basis (covering possible areas excluded by Article 2, paragraph 2 of the Safety Directive), iii = Optional - other criteria (National rules / regulations to which the Safety Directive makes no reference).

#### Studies ordered in 2013

Order date	Study name (type, location)	Basis for legislation	Additional data
-	-	-	-

(1) **The legal basis of the investigation:** i = In accordance with the Safety Directive, ii = The National legal basis (covering possible areas excluded by Article 2, paragraph 2 of the Safety Directive), iii = Optional - other criteria (National rules / regulations to which the Safety Directive makes no reference).

### 3.4. Summary of investigations completed in 2013

During 2013 there were completed a number of 39 investigations from which 10 were opened in 2012 and 29 investigation opened in 2013.

Below is a situation of the 39 investigation reports completed during 2013.

3.4.1. The railway accident occurred on the 2<sup>nd</sup> of September 2012, at 19:50 o'clock, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Bucuresti, in the railway station Bucurestii Noi through the derailment of the first two axles of the locomotive EA 526, which hauled the freight train no.84796-1 (belonging to the railway freight transport operator SNTFM „CFR Marfa” SA).

The investigation report was completed on 11<sup>th</sup> of February 2013.

**The direct cause** of this accident is the climbing of the right wheel flange, from the axle no.6 (first in the running direction) because of loss of the guiding capacity, generated by the technical condition of the sleepers, that did not allow a suitable fastening.

**The contributing factors:**

- the use of the special sleepers that through their length could not ensure the fastening of all rails corresponding to those two directions of the switch no.9C (their length ensured the fastening only for 3 rails)

**Underlying cause**

Keeping in operation the unsuitable sleepers in the switch no.9C, due the lack of supply with the all requested quantity of special sleepers for the switches. For this reason, one used recovered special sleepers, but with shorter lengths against the assembly plan, that did not ensure the fastening of those 4 rails corresponding to those two directions of the switch no.9C.

**Root causes** – None.

**Safety recommendations** – None.

3.4.2. The railway accident occurred on the 28<sup>th</sup> of September 2012, at 05,36 o'clock, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Craiova, in the railway station Targu Jiu, through the derailments of the first axle in the running direction of the locomotive ED 030 (inactive), being first after the hauling locomotive (EA 830) of the freight train no.84790, belonging to the freight undertaking SNTFM „CFR Marfa” SA.

The investigation report was completed on 15<sup>th</sup> of January 2013.

**The direct cause**

The direct cause of this accident was the significant load transfer from the axle no. 1, which affected the guidance capacity and the safety coefficient against derailment, it leading to the climbing of the right wheel flange, in the running direction, on the head of rail, corresponding to the exterior curve rail, its running on the rail about 900 mm, followed by the derailment of the axle, with the left wheel inside the track.

**Contributing factors**

The existence of failures at the locomotive, presented below:

- a difference of 2,19 mm between the running tread diameters of the wheels from the axle 1 (compared with 0.3 mm admitted by the specific regulations for the turned axles);
- a difference between the running tread diameters of the wheels:
  - axle 1 and axle 2 of 21,38 mm;
  - axle 1 and axle 3 of 19,9 mm,

compared with 4 mm admitted in the operation by the specific regulations, without the adjustment of the tolerances;

- differences between the loads on the wheels without balancing:
  - 3,4% between the load on the left and the right wheel of the axle no 3;
  - 2,9% between the load on the left and the right wheel of the axle no 4;
  - 4,5% between the load on the left and the right wheel of the axle no 5;
  - 3,4% between the load on the left and the right wheel of the axle no 6;

compared with  $\pm 2\%$  admitted in the operation by the specific regulations in force, without the adjustment of the tolerances

- the existence of burr, on the active flank of the wheel flange on the right side in the running direction of the axle 1, resulted from the turning of the wheel;

- overcoming the horizontal clearance admitted between side rubber buffers and bogie frames:

- 20 mm compared with the minimum 22 mm at the bogie no. 1;
- 37 mm compared with the maximum 28 mm at the bogie no. 2.

**Underlying cause**

Non-compliance of the technological repair processes of the locomotives, by routing them without all instructional checks.

**Root causes** - None.

**Safety recommendation** – None.

3.4.3. The railway accident occurred on 02<sup>nd</sup> of October 2012, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Craiova, between the railway stations Popești - Copaceni, through the derailment of the first axle of the locomotive DA 1636 as hauled engine to the freight train no.39237, belonging to the railway undertaking **SC SERVTRANS INVEST SA**.

The investigation report was completed on 07<sup>th</sup> of February 2013.

**The direct cause** consists of exceeding the tolerance admitted at the track twisting imposed by the provisions of Instruction no.314/1986 (over 12,5 mm), that had as effect the load transfer of axle no.1 of locomotive, climbing the flange from the right side of this wheel on the head of rail running surface corresponding to the outer curve rail, followed by the axle derailment.

**Contributing factors:**

- the difference of 2,12 mm between the wheels diameter (left - right) at the axle no.1 of locomotive DA 60-1636-4;
- difference between the rolling circle diameter of the wheel-set from the first bogie, right side in the running direction is of 14.52 mm, from the rolling circle diameter of axle no.1 and rolling circle diameter of axle no.2;
- exceeding the maximum speed of the speed limit of 15 km/h.
- exceeding of the admitted tolerances at the track twisting, respectively more than 12,5 mm difference between two consecutive measurements made at 2,5 m for speed between 10-39 km/h.

The axle derailment occurred due to the above factors, none of them alone could have cause the locomotive axle derailment.

**Underlying causes**

- non-respecting of the provisions of art.7, point.4 of the Instruction for norms and tolerances for track construction and maintenance no.314/1989 on track twisting.
- placing into operation of the locomotive without safety conditions compliance.

**Root causes** - None.

**Safety recommendations** - None

3.4.4. The railway accident occurred on the 12<sup>th</sup> of October 2012, at 00,20 o'clock, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Braşov, traffic section Sancel – Praid (not electrified simple line – not interoperable section administrated by SC RC-CF Trans SRL Braşov), between the railway stations Praid and Sovata, through the derailment of wagons no. 33876735928-8 and 31555972485-3 (9<sup>th</sup> and 10<sup>th</sup>) from the freight train no.99962 belonging to the railway freight transport operator SC Rail Force SRL.

The investigation report was completed on 17<sup>th</sup> of January 2013.

**The direct cause** constituted the existence of an gauge which values was exceeding the maximum admitted value from the provisions of Chapter 1, Article 1, point 13 of the Instruction for norms and tolerances for track construction and maintenance no. 314/1989.

**Contributing factors:**

- poor condition of sleepers, which allowed increasing the gauge above the admitted values in operation;
- the poor condition of the wagon no. 33876735928-8, which consisted in a characteristic defect at axle no. 1, in the sense that the distance between the exterior surfaces of the wheel

flange was below the minimum admitted by the provisions of Article 221 (2) letter a from the Regulation of the Railway Technical Operations nr. 002/2001.

**Underlying causes:**

- non-corresponding revisions and maintenance works of the track;
- failure to check the main conditions which has to be met by the wheel-sets of hauled railway vehicles, to be allowed to run on the railway infrastructure lines.

**Root causes** - None.

**Safety recommendations** – None.

3.4.5. The railway accident occurred on the 28<sup>th</sup> of October 2012, at around 9:06 o'clock, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Timisoara, traffic section Berzovia – Gataia (non-electrified single line – non interoperable line administrated by SC RC-CF TRANS SRL Brasov), in the railway station Gataia, in the running of the passenger train no.14446 (belonging to the railway undertaking SC REGIOTRANS SRL Brasov), through the derailment of both bogies of the diesel multiple unit AMX no.577.

The investigation report was completed on 21<sup>st</sup> of February 2013.

**The direct cause** of the derailment is the unsuitable operation of the switch no.6, it leading to the running of the axles from both bogies on the stock rails up to the point where the distance between the lateral running sides of the stock rail heads exceeded the maximum value of the gauge (1470 mm), followed by the fall of the right wheels between the right stock rail and the curved point and of the left wheels between the curved stock rail and the right point.

This operation was possible by the forced re-opening of the electrically insulated track „from and to Resita” because of the manual hit by the signalmen of the press rod of the electrically insulated track of the signal box, permitting in this way the signal sending to the movements inspector and the opening of the entry route before the train stabling.

**Contributing factors** – None.

**The underlying causes**

Non-performance of the monthly inspection of the signal box no.2 in September 2012.

**Root causes** - None.

**Safety recommendations** – None.

3.4.6. The railway accident occurred on the 12<sup>th</sup> of November 2012, at 16,50 o'clock, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Timisoara, traffic section Livezeni – Lupeni (electrified single line – non interoperable line, administrated by SC RC-CF TRANS SRL Brasov), between the railway stations Lupeni Tehnic and Vulcan, in the running of the freight train no.23815 (belonging to the railway freight transport operator SNTFM „CFR Marfa” SA) through the derailment of the last 4 wagons from the train, loaded with coals.

The investigation report was completed on 12<sup>th</sup> of February 2013.

**The direct cause** of this accident was the fall from the interior curve rail of the wheel no.2 from the bogie no.1 of the wagon no.5 from the rear of the train, as a result of the track overwidening to the existence of a reduced mobility of the bogie no.1.

**Contributing factors**

- the number of unsuitable sleepers on a track length of 30 m, in a 25% percent vs.7% admitted, as well as from their position on the track resulted a number of 6 unsuitable sleepers which had to be urgently replaced, leading to movement under the action of the rolling stock of the metal plates between 8 mm (interior rail) and 24 mm (exterior rail); after measurements and calculations resulted, on the sleeper 19, a real value of the gauge of 1502 mm;
- lack of clearance on the side bearers blocks, afferent the derailed bogie and the simultaneous support of the wagon frame on the two frictions stones;

- partial damage of the wear fitting, polyamide type, through the fragmenting and the collection of this fragments in the inferior part of the center casting liner, fact which determined a direct contact (partial) of the superior center casting with the inferior center casting liner with increasing of the friction coefficient between the two metallic surfaces.

**Underlying cause**

*There were identified the following underlying causes on competencies:*

- for the ganger position, at the track inspection are used trackmen I (not trained, unauthorized, without a certification of medical- psychological skills for the ganger position);
- for the gang foreman position are used trackmen I (not trained, unauthorized, without a certification of medical- psychological skills for the gang position).

*There were identified the following underlying causes on the maintenance:*

- one does not make the removal of the track failures detected by the testing and measuring car, so the gauge failures detected on the curve from the km 94+955-95+310 in the area of the km 95+100-95+200, at the check from 25<sup>th</sup> of May 2011, resting until the 12<sup>th</sup> of November 2012, when the derailment occurred;
- one did not replace the unsuitable sleepers, reviewed for the period 2011/2012 (described in the delivery documents of the Line 117 (Livezeni-Lupeni), by the L9 Track Section Simeria to the S.C. RC-CF TRANS S.R.L. Brasov, in a number of 2150 pieces.

**Root causes** – None.

**Safety recommendations** – None.

3.4.7. The railway accident occurred on the 06<sup>th</sup> of December 2012, at 16,30 o'clock, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Constanța, in the railway station Fetesti, by incorrect handling of the disposing station movement inspector of switches 14/28 from the station during the dispatch of the train Regio 1681 (switches being on the dispatch route of the train no.1681 – train belonging to SNTFC CFR Calatori SA.

The investigation report was completed on 16<sup>th</sup> of January 2013.

**The direct cause** was the handling irregular interlocking installation of points and signals by running the disposing station movement inspector of route shuntings in centralized system simultaneously during the dispatch route of the train no. 1681 based on telephonic arrangements.

**Contributing factors:**

- failure to check the schedule of the route with button BKST-Y;
- the performing in block of a command from signal M18 to signal XIII, against the initial performed route.

**Underlying cause** – None.

**Root causes** – None.

**Safety recommendations** – None.

3.4.8. The railway accident occurred on the 22<sup>nd</sup> of December 2012, at 12,35 o'clock, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Branch Timisoara, traffic section Simeria – Livezeni, (electrified, double line), in the railway station Pui, through the derailment of the second bogie in the running direction of the wagon no.88536656800, (9<sup>th</sup> from the locomotive), from the freight train no.50408 (belonging to the railway freight transport operator SC UNIFERTRANS SA), over the switch no.15 from the station.

The investigation report was completed on 21<sup>st</sup> of Febr. 2013.

**The direct cause** of this accident was that the wheels of the axle left the line, because the fall of the brake-block holder situated in front of the wheel no.5, in the running direction, from the wagon no.88536656800-8 and the its blocking in the trench between the track from the left

side and the panels of the level crossing situated in the railway station Pui, at km 43 +810, becoming an obstacle in the track gauge.

**Contributing factors**

The faulty repair performed at the safety straps afferent to the front part, in the running direction, of the wheel no.5 of the wagon.

**Underlying cause**

- non compliance with the instructional provisions performed at the technical inspections at the train composition and in transit made at the freight train no.50408, on 22<sup>nd</sup> of December 2012, containing the wagon no.88536656800-8.

**Root causes** – None.

**Safety recommendation** – None.

3.4.9. The railway incident occurred on the 22<sup>nd</sup> of December 2012, 5,30 o'clock, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Iasi, on the traffic section Iasi – Pascani (electrified, double line) between the railway stations Ruginoasa and Targu Frumos, in the running of the freight train no.61723-2 (SNTFM „CFR Marfa” SA) by exceeding the maximum speed admitted by the line.

The investigation report was completed on 10<sup>th</sup> of July 2013.

**Direct cause:** The changeover device “Empty - Medium - Loaded” weren't handled in the corresponding position to the loading state of the wagons (wagons were loaded and the changeover device were handled in “empty” position, which implies the realization of smaller pressures in the brake cylinders and implicit of an inferior braked weight).

**Contributing factors**

- defective actuation of the automatic brake of the train on its downhill descent to the railway station Târgu Frumos by performing of depressions in the main air pipe of the train, smaller than those foreseen in the regulations in force;
- defective rheostat brake on both locomotives.

**Underlying cause:**

- Failure to record in the form " Brake notes " by the wagon technical examiner of a reminder referring to the existence of non-metallic blocks which could led to other position of the brake exchanger at the loaded wagons.

**Root causes:**

The regulations for the running of the transposed CSI wagons, in force on the railway network, respectively the Order 25/A/206/1975 don't stated clearly:

- in which of the positions “Medium” or “Loaded” must be handled the changeover device “Empty – Medium - Loaded” in the situation of the transposed CSI wagons, loaded, equipped with non-metallic blocks “Empty-Medium-Loaded” when translated CSI wagons, loaded, equipped with nonmetallic blocks, the changeover device “Empty-Medium-Loaded” and progressive and automatic braking of the load type AUTOREGIME;
- how its established the braked mass in the case of the use of other types of bogies, others than those that have been taken in account at the drafting of the Order 25/A/296/1975 - (bogies belonging SNTFM "CFR Marfa" SA) and how it sets the braked mass at bogies at other railway administrations (Moldavian Railways, Ukrainian Railways, etc.) which have other characteristics.

**Safety recommendations:**

Updating the Order 25/A/206/1975 with provisions regarding:

- a) how to handle the changeover device, “Empty – Medium - Loaded” from transposed CSI wagons, loaded, on which the transposing bogies are equipped with non-metallic blocks with device for progressive and automatic braking proportional to the axle load type AUTOREGIME;
- b) the mode which sets the mass braked in the case of CSI wagons on bogies with non-metallic blocks implemented by the administrations of neighboring railways (Moldavian Railways, Ukrainian Railways, etc.);

c) the type and characteristics of the automatic brake currently implemented on the CSI wagons.

3.4.10. The railway accident occurred on the 30<sup>th</sup> of December 2012, 18,50 o'clock, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Timișoara, in the railway station Petrosani, in the running of the freight train no.20976-1 (belonging to SC Cargo Trans Vagon SA), through the derailment of an axle of wagon no.33535300809-7 (loaded with coals).

The investigation report was completed on 16<sup>th</sup> of May 2013.

**The direct cause** loosening the wheel tyre no.5, due to the decrease in time of the tightening force performed by the wheel tyre no.5 on this monobloc wheel body, followed by its rotation and lateral displacement on the monobloc wheel body. This fact led to the derailment of the wheel-set corresponding to wheels no.5 – 6 from wagon no.33535300809-7 of the train no.20976-1 on the 30<sup>th</sup> of December 2012, outside the left rail of the running track and with no.6 inside the running track in the right of the km.79+050.

**Contributing factors**

- mechanic and thermic stresses appeared during axle operation;
- long service life of the tyre (the tyre was built in 1977);
- tyre wear in the running tread plan close to the limit allowed in operation;
- high roughness of the surfaces of the monobloc wheel body and tyre that were in contact.

**Underlying causes** – None.

**Root causes** – None.

**Safety recommendation** – None.

3.4.11. The railway accident occurred on the 05<sup>th</sup> of February 2012, 16,30 o'clock, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Craiova, traffic section Babeni - Alunu (non-interoperable section belonging to SC RC-CF Trans SRL Brasov – non-electrified, simple line), in the railway station Copaceni through the derailment of the first bogie in the running direction of the 7<sup>th</sup> wagon from the rear of the train, from the freight train no.23683 (belonging to the railway freight transport operator SNTFM „CFR Marfa” SA).

The investigation report was completed on 17<sup>th</sup> of April 2013.

**The direct cause** constituted the running of the first bogie in the running direction of wagon no.81536651686-3 (15<sup>th</sup> from the locomotive) from the train no.23683 on the 05<sup>th</sup> of February 2013 on an area where the track presented exceeding over the admitted tolerances at cross level, also at the track twist.

**Contributing factors**

- the difference between the running threads diameters of wheels no.5-6 of the leading axle from the first bogie from wagon no.81536651686-3 was bigger than that instructionally admitted;
- the center pivot socket liner from the derailed bogie's center casting was deteriorated, with missing fragments.

**Underlying causes:**

- non-respecting of the provisions of art. 7, point. 4 of the Instruction for norms and tolerances for track construction and maintenance no. 314/1989 on track twist.

**Root causes** – None.

**Safety recommendation** – None.

3.4.12. The railway accident occurred on the 14<sup>th</sup> of February 2013, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Galati, between the connection railway stations Galati and Catușa (not-electrified simple line), in open line at km

3+480, in the running of the freight train no.76052 (belonging to the railway undertaking SNTFM "CFR MARFA" S.A.), through a fire at locomotive DA L 1069.

The investigation report was completed on 26<sup>th</sup> of April 2013.

**The direct cause:** the fire occurred due the short-circuit at the force wiring from the traction engine no.5, due the decreasing of the isolation resistance of the cables coating and its breakthrough, fact which led finally at the melting of the cables at a distance of 300 mm from traction engine terminals and the ignition of the cable coatings.

**Contributing factors**

- the aging of the supply cables coatings of the traction engine no.5;
- the poor state of cleanliness of the traction engines due the loss of fuel and oil from the respective installations.

**Underlying causes**

The repair cycle at the engines and the mandatory inspection at the locomotive were not respected, according to the provisions of the railway Norm "Railway Vehicles. Types of inspections and planned repairs. Time norms or mileage standards for maintenance and planned repairs", approved by Ministry of Transport and Infrastructure's Order no.315/2011, amended and supplemented by the Minister of Transport and Infrastructure's Order no.1359/2012.

**Root causes** – None.

**Safety recommendations** – None.

3.4.13. The railway accident occurred on the 18<sup>th</sup> of February 2013, in the activity of the Branch of the Regional Center for Railway Operation, Maintenance and Repairs Constanta, traffic section Capu Midia - Dorobantu (non-interoperable section belonging to SC GFR SA – non-electrified double line), in the railway station Navodari through the derailment of the first bogie in the running direction of the wagon no.33877852335-1 (being the 1<sup>st</sup> from the locomotive, loaded with diesel) from the freight train no.89614 (belonging to the railway freight transport operator SC GFR SA).

The investigation report was completed on 09<sup>th</sup> of May 2013.

**The direct causes:** not corresponding wooden sleepers which yielded under the load, not providing the track gauge in the tolerance limits, leading to the fall on the interior curve rail, between the stretches of the track of the first wheel from the first bogie in the running direction of the wagon no.33877852335-1 (first wagon after the locomotive).

**Contributing factors**

- the totally clearance at the side bearers of the first bogie in the running direction was non-instructionally (of 3 mm).

**Underlying causes** – None.

**Root causes-** None.

**Safety recommendations** – None.

3.4.14. The railway accident occurred on the 12<sup>th</sup> of March 2013, at around 13,47 o'clock, in the running of the passenger train no.14016(AMX 97-1702-6 and the trailer car 74-1702-0), belonging to the passenger railway transport operator SC REGIOTRANS SRL Brasov, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Cluj, in the railway station Magherus Sieu, through the derailment of a bogie of the trailer car. The investigation report was completed on 15<sup>th</sup> of April 2013.

**The direct cause** was the losing the guidance capacity of the running gear and leaving of this by the wheels of the first axle from the first bogie of the trailer car of the from the DMU AMX 97-1702-6 at the switch no.2, due the handling of this at the passing of the train no.14016.

**Contributing factors** - None

**Underlying cause**

- Failure to check on the site of the switch no.2, violating the provisions of art. 42 „Failure at one or more switches”, from Operation Instruction of the Electrodynamics Centralizing Installation type CR2 Domino from the railway station Magherus Sieu, no.350/2002, prepared by the CT 2 Section Dej and approved by the leadership of Branch CFR Cluj.
- The handling of the safety installation by the employees which are not on duty (at the request of the movement inspector on duty), violating the provisions of art.12 from the Railway Technical Operation Regulation no.002, approved through the Order of the Minister Of Transports, Constructions and Tourism no.1186 from 29<sup>th</sup> of August 2001.

**Root cause** – None.

**Safety recommendations** – None.

3.4.15. The railway accident occurred on the 14<sup>th</sup> of March 2013, at 21,30 o'clock, in the running of the freight train 91718 (belonging to the railway freight transport operator SNTFM „CFR MARFA” SA), in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs Timisoara, in the railway station Cavarau, through the derailment of a bogie from the 9<sup>th</sup> wagon from the rear of the train.

The investigation report was completed on 17<sup>th</sup> of July 2013.

**The direct cause**

- weakening of the wheel no.5 rim, belonging to the second axle from the first bogie in the running direction of the wagon no.81536655080-5, due the diminishing in time of the clamping force between the tire and the monobloc wheel body, followed by the spin of this, the destruction of the tire mounting ring and its transverse movement of the monobloc wheel body.

This fact determined the accidental modification of the gauge of the axle with wheels no.5-6 and led to the:

- derailment of wheel no.5 on the intermediate panel between the switch no.5 and switch no.5A in the exterior of the track on the left side in the running direction and the wheel no.6 in the interior of the track;
- drive in derailment of the axle with the wheel no.7-8 from the same bogie between the switch 5A and the fog of this with the wheel no.7 from the left side in the running direction in the exterior of the track and with wheel no.8 in the interior.

**Contributing factors**

- heating and mechanical stress being put on the tire in the wagon's running;
- long duration of use of the tire (the tire was made in 1977);
- the thickness of the tire in the running thread plane closed to the minimum limit admitted.

**Underlying cause**

- non instructional treating of the lack of markings on the exterior of the wheel with the performing of the technical inspection of the wagon.

**Root cause** – None.

**Safety recommendations** – None.

3.4.16. The railway incident occurred on the 07<sup>th</sup> of April 2013, 00,07 o'clock, in the range of activity of the Regional Center for Railway Operation, Maintenance and Repairs București, in the railway station Tarnavele, through the exceeding of the exit signal Y2, which ordered “stop” by the freight train no.29902, hauled with DA 751 (belonging to SC Cargo Trans Vagon SA).

The investigation report was completed on 26<sup>th</sup> of April 2013.

**The direct cause** was the not stopping of the freight train no.29902, hauled with the locomotive ER 2016 751-1, before the colour light exit signal Y2, although its indication was red („STOP without exceeding the signal!"). This fact was possible following the fact that the locomotive personnel slept on duty.

**Contributing factors** – None.

**Underlying causes:**

- the train locomotive was driven by the driver's assistant;
- exceeding of the maximum working time accepted for the locomotive.

**Root causes** - none.**Safety recommendations** - none.

3.4.17. The railway accident occurred on the 07th of April 2013, at 12:25 o'clock, in the running of the freight train no.60832-1, belonging to the railway freight undertaking SC Transferoviar Grup SA, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Timișoara, between the railway stations Baru Mare and Pui, consisting in the derailment of a bogie of the 5th wagon from the rear of the train.

The investigation report was completed on the 18th of July 2013

**Direct cause** consisted in the removal of the wheels no.4 and 5 from the first axle of the first bogie from the wagon no.31555972602-3, following the decrease of the fastening force of the wheel boss on the axle pressing areas

**Contributing factors**

- deep appearance of rust on the whole circumference of axle pressing areas on a variable width situated between 22 and 38 mm, respectively deep rust points on area with irregular shape of about 500 mm<sup>2</sup>, influencing the fastening force of the wheel boss on the axle pressing area generated by a nonconformity from the assembly process of the pair of wheels.

**Underlying causes** – none.**Root causes** - none.**Safety recommendations** - none.

3.4.18. The railway accident happened on the 17th of April 2013, at 11,15 o'clock in the running of the freight train no.23682, belonging to the railway freight undertaking S.N.T.F.M. „CFR Marfă” S.A., in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Craiova, between the railway stations Copăceni and Popești, consisting in the derailment of 2 wagons.

The investigation report was completed on 02nd of July 2013.

**The direct cause** was the exceeding of the accepted tolerances for the stipulated crossing level, and for track twist.

**Contributing factors** - none.**Underlying causes:**

- non-compliance with the provisions of the art.7, point 4 from the Instruction of norms and tolerances for the track construction and maintenance no.314/1989 on track twist.

**Root causes** - none.**Safety recommendations** - none.

3.4.19. The railway accident occurred on the 3rd of May 2013, at 18:07 o'clock, in the running of the freight train no.71734, belonging to the railway freight undertaking SNTFM „CFR Marfă” S.A., in the branch of the Regional Center of Railway Operation, Maintenance and Repairs București, between the railway stations Fusea și Mătășaru, consisting in a fire in the locomotive DA 1362.

The investigation report was completed on the 10th of June 2013.

**The direct cause** was a short circuit at the connections of the traction engine no.4, on the conductors with different potential, because of the decrease of the di-electric strength of the cable sheathings and their breakdown, it leading finally to the sheathings ignition.

**Contributing factors:**

- ageing of the cable sheathing for the power supply of the traction engine;

- unsuitable cleaning of the locomotive following the leaks of oil and fuel from these equipments.

**Underlying causes:**

- one did not meet with period of the compulsory repairs at the locomotive, according to the provisions of the Railway regulatory document "Railway vehicles. Types of inspections and planned repairs. Time and km norms for the performance of inspections and planned repairs", approved by the Order of Minister of Transports and Infrastructure no.315/2011, amended by the Order of Minister of Transports and Infrastructure no.1359/2012.

**Root causes** - none.

**Safety recommendations** - none.

3.4.20. The railway accident occurred on the 01st May 2013, at 05:45 o'clock, in the running of the freight train no.20900, belonging to the railway freight undertaking CARGO TRANS VAGON S.A., in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Constanța, in the railway station Agigea Nord, consisting in the derailment of 2 wagons (second axle from the first bogie of the first wagon the first bogie of the second wagon).

The investigation report was completed on the 10th of June 2013.

**The direct cause** was the blocking of the track by the jamming of drag shoe no.3 of the railway station Agigea Nord at the built-up common crossing of the switch no.21 end X of the railway station Agigea Nord, at the dispatching of the freight train no.20900 from the line 6, without the removal of the drag shoe no.3 from the wheel, it leading to the derailment of an axle (3-4), second in the running direction, from the wagon no.33879335976-5, first after the locomotive and of a bogie (axles 1-2, 3-4), first in the running direction, from the wagon no.33879345941-7, second after the locomotive.

**Contributing factors:**

- lack of control of the removal of the drag shoe no.3 from the wheel of the wagon no.33879335976-5 before dispatching the freight train no.20900

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none.

3.4.21. The railway incident occurred on the 17th of May 2013, at 16.35 o'clock, in the running of the passenger train no.9006 (belonging to the railway passenger undertaking SNTFC „CFR Călători” SA), in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Craiova, in the railway station Milcov, consisting in the starting-up of the train.

The investigation report was completed on the 18th of June 2013.

**The direct cause** was the non-application of the automatic and hand brakes from the locomotive for keeping stopped the train during its stop in the railway station.

**Contributing factors**

- the driver left the locomotive without meet with the regulations in force;

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** – none

3.4.22. The railway incident occurred on the 22nd of July 2012, at 14:38 o'clock, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Timișoara, in the railway station Băile Calacea, consisting in going out of the station limit during the re-stabling process of the rake of wagons consisting in 26 wagons, from the line no.2 to the line no.1.

The investigation report was completed on the 28th of August 2013.

**The direct cause** was the serious collision between the rake of wagons and the buffer stop 01 - end X of the railway station Băile Calacea (the buffer stop of the shunting neck no.5, from the extension of line 1), because of the missing of the driver from the locomotive.

**Contributing factors**

- putting out of service of the safety and vigilance equipment, corroborated with the missing from the driving cab of the locomotive of a trained person that could take all the measures if the driver is no able to drive;
- the involved factors accept the working mode wrong, in the shunting operations, violation with knowingly the instruction provisions stipulated in the investigation report.

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none.

3.4.23. The railway incident occurred on the 01st of July 2013, at 21.52 o'clock, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Craiova, in the railway station Ionești, consisting in the passing of the exit semaphore serving group of railway lines no.1, on stop position, by the freight train no.39618 (belonging to DB SCHENKER RAIL ROMÂNIA S.R.L.).

The investigation report was completed on the 18th of July 2013.

**The direct cause** was the failure to stop of the freight train no.39618, hauled by the locomotive DA 92 53 060 1680-7, before the shunting limit signal of the exit semaphore B, though its position was red (*"STOP without passing the signal"*).

**Contributing factors** - none.

**Underlying causes:**

- exceeding of the maximum working time accepted for the locomotive;
- non-compliance with the running conditions of the train, established in the working timetable.

**Root causes** - none.

**Safety recommendations** - none.

3.4.24. The railway incident occurred on the 4th of July 2013, at 04.00 o'clock, , in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Cluj, in the railway station Tășnad, consisting in the passing of the exit signal on stop position by the train no.69835-2, hauled by DA 412 ( belonging to SC Transferoviar Grup SA).

The investigation report was completed on the 25th of July 2013.

**The direct cause** was the non-performance in good time of train braking for speed decrease, for the train stop in the established place.

**Contributing factors** - none.

**Underlying causes:**

- putting out of service, without reason, of the equipment for the automatic control of the train speed, non-meeting with the provisions from the Annex 2 of „Instructions for the locomotive staff activity” – no.201 approved by Order of Minister of Transports, Constructions and Tourism no.2.229 from the 23rd of November 2006.

**Root causes** - none.

**Safety recommendations** - none.

3.4.25. The railway accident occurred on the 6th of July 2013, at 06:15 o'clock, in the running of the freight train no.48420-1, belonging to the railway freight undertaking SNTFM „CFR Marfă” S.A., in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Timișoara, in the railway station Ilia, consisting in a fire at the hauling locomotive 551.

The investigation report was completed on the 13th of September 2013.

**The direct cause** was the appearance of a short circuit in the storage battery circuit, between the electric cables M0, respectively 405 and the flexible metallic hose for protection, situated under the locomotive, in the area of the fastening band.

Following the short circuit the insulation of the electric cables M0 and 405 ignited and flexible metallic hoses for protection melted and during the running, because the air streams under the locomotive, the flame extended in the bellows of the traction engine no.3 (MT3), leading to its ignition.

**Contributing factors**

- degradation in time of the insulating material of the electric cables because its ageing;
- degradation in time of the insulating material of the electric cables because their friction with the flexible metallic hoses in the area of the fastening band.

**Underlying causes:**

- the period of the repairs at the locomotive was not meet with , according to the provisions of the Railway regulatory document "Railway vehicles. Types of inspections and planned repairs. Time and km norms for the performance of inspections and planned repairs", approved by the Order of Minister of Transports and Infrastructure no.315/2011, amended by the Order of minister of Transports and Infrastructure no.1359/2012.

**Root causes** - none.

**Safety recommendations** – none.

3.4.26. The railway accident occurred on the 9th of July 2013, at 12:15 o'clock, in the running of the freight train no.97583 (consisting in the locomotives EA 222 and EA 867), belonging to the railway freight undertaking SNTFM „CFR Marfă” S.A., in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Craiova, in the railway station Drobeta Turnu Severin Goods, consisting in a fire at the locomotive EA 222.

The investigation report was completed on the 29th of August 2013.

**The direct cause** was a short circuit appeared in the area of the link of the force cables from the traction engine no.3, on the conductors with different electric potential, because the decrease in time of the di-electric strength of the insulating material of the cables and its breakdown.

Following the short circuit the insulating material of the cables ignited , the fire extended in the bellows MT3, respectively at the insulating material of the other electric cables and of the devices from the block S3.

**Contributing factors** - none.

**Underlying causes:**

- degradation in time of the insulating material of the electric cables because its ageing;
- degradation in time of the insulating material of the electric cables because their friction with the fastening link.

**Root causes** - none.

**Safety recommendations** – none

3.4.27. The railway incident occurred on the 10th of July 2013, at 06.38 o'clock, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Timișoara, on the running line between the railway stations Armeniș and Teregova, consisting in the breaking of the upper connections to earth and the pulling of the tunnel refuge, along whole tunnel from the km 446+650 to the km 447+100, by the running rolling stock.

The investigation report was completed on the 12th of August 2013.

**The direct cause** was the opening during the running of the lateral left doors, running direction, at the wagon no.35835320270-0, the 3-rd in the consist of the train no.20976-1, from the locomotive, doors that were not properly closed and ensured.

**Contributing factors:**

- breakdown of the lower cam of the closing device shaft.

**Underlying causes:**

- non-compliance with the instruction provisions during the technical inspections, at the composition, respectively in transit, performed at the freight train no.20976-1 on the 9th of July 2013, in its consist being the wagon no.35835320270-0.

**Root causes** - none.

**Safety recommendations** – none.

3.4.28. The railway accident occurred on the 20th of July 2013, at 05:26 o'clock, in the running of the freight train no.83216, belonging to the railway freight undertaking SNTFM "CFR MARFĂ" S.A., in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Craiova, at the exit from the railway station Roşiori Nord, consisting in the derailment of both bogies from the 4th wagon, from the rear of the train. The investigation report was completed on the 27th of November 2013.

**The direct cause** was the loss of the guiding capacity of the rail at the joint from the toe of switch blade no.15 from the double slip points no.17/15, it leading to the climbing of the wheel no.1 (right wheel running direction of the train) of the first axle from the first bogie on the rail, followed by the wheel no.2 on the check rail at the frog of the switch no.15, the running of this wheel on the upper surface of the check rail, followed by its fall between the rails.

**Contributing factors**

- composition and technical condition of the joints and sleepers at the toe of switch blade no.15;  
- possible locking, at the running start of the wagon on the ordered route, of the continuous rotation of the bogie, detected by identifying the existence of some specific traces on the upper guide of the bogie.

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none.

3.4.29. The railway accident occurred on the 29th of July 2013, at 15:50 o'clock, in the running of the freight train no.29922, belonging to the railway freight undertaking CARGO TRANS VAGON S.A., in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Timișoara, between the railway stations Bănița and Petroșani, consisting in the derailment of the first axle of the second bogie in the running direction, from the 7th wagon.

The investigation report was completed on the 25th of September 2013.

**The direct cause** was the loss in the track stability by the appearance of two horizontal track distortions with the track deflection of 27,49 mm at the distortion length of 6,56 m and of 71,39 mm at the distortion length of 7,74 m, leading to the running of the left wheel no.3 of the second bogie from the wagon no.33529341015-5 on the rail head surface (inner rail) and then its fall outside the track, followed by the fall of the right wheel no.4 inside the track.

**Contributing factors**

- missing of the broken stone, for the supplementation of the track bed according to the regulation sizes;  
- compression stresses existing in the rails, increased by the expansion joints, that led to the behavior of the non-welded track like a welded one.

**Underlying causes:**

- non-performance of the works, up to the 15th of Aprilie 2013, for the decreasing of the joint expansions at normal sizes;

- performance of works that can lead to the decrease of the track stability, without taking the safety measures imposed by the regulations.

**Root causes** - none.

**Safety recommendations** – none

3.4.30. The railway incident occurred on the 07th of Aprilie 2013, at 20:25 o'clock, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Craiova, track section Craiova - Prunișor, consisting in the exceeding of the maximum running speed on a distance of 345 m by the locomotive EA 732 (engine depot Timișoara), running with the speed of 123 km/h instead of maximum 120 km/h, speed found out at the reading of the speed recorder tape.

The investigation report was completed on the 23rd of August 2013.

**The direct cause** was the driving of the train at its running limit speed.

**Contributing factors:**

- blocking of the graduation device on upper increase position, mentioned by the driver

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none

3.4.31. The railway incident occurred on the 03rd of August 2013, at 12:41 o'clock, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Craiova, in the railway station Filiași, by the wrong making of the exit route for the train 2021 (to Tântăreni instead to Gura Motru).

The investigation report was completed on the 23rd of August 2013.

**The direct cause** was the appearance of a human mistake in the making of the route to Tîntăreni instead to Gura Motrului and the dispatching of the train without being sure of the route rightness.

**Contributing factors** none.

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none

3.4.32. The railway accident occurred on the 10th of August 2013, at 02:15 o'clock, in the running of the freight train no.50451, belonging to SC UNICOM TRANZIT SA, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Cluj, in the railway station Dej Triaj, switch no.23A, consisting in the derailment of all axles from the 16th wagons from the locomotive.

The investigation report was completed on the 23rd of August 2013.

**The direct cause** was the transfer of the wheels load of the first axle because the load was not uniform distributed in the wagon no.33535304602-0, the 15th from the locomotive.

It led to the exceeding of the report of the loads on the wheels from the first axle of the first bogie of the wagon in the running direction.

**Contributing factors:**

- irregular distribution of the refuses of small diameter and thin on the bottom of the wagon and of those of large diameter and thick, of big weight, on the top of the loading, against the loading method stipulated at the point 1.11.2. from the provisions of the annex II RIV;

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none

3.4.33. The railway incidents occurred on the 18th of May 2013, at 04:32 o'clock and at 09:08 o'clock, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Braşov, between the railway stations Mureni and Beia, consisting in the exceeding by the trains R3510 and R3500 (belonging to SNTFC „CFR CĂLĂTORI” S.A.) of the maximum running speed established by running order.

The investigation report was completed on the 08th of October 2013.

**Direct cause:**

**Train R 3510:**

- lack of notification by running order about the speed restriction as well as about the change of the conditions written down in Restriction Speed Notification Document - B.A.R. Braşov, decade 11-20.05.2013, line 300 Bucureşti Nord-Episcopia Bihor, pag. 36, point.45, at the departure of the train from the railway station Mureni;
- lack of compliance with the provisions from the Signaling regulations no.004/2006 according that the train running on an un-consolidated track section is made with the restricted speed indicated by the speed restriction limit, up to the last wagon of the train the passed the signal “S”- speed restriction end.

**Train R3500:**

- lack of notification by running order about the speed restriction as well as about the change of the conditions written down in Restriction Speed Notification Document - B.A.R. Braşov, decade 11-20.05.2013, line 300 Bucureşti Nord-Episcopia Bihor, pag. 36, point.45, at the departure of the train from the railway station Mureni;

**Contributing factors:**

Lack of notification by fax or telephone call of the railway undertakings about the establishment of an un-foreseen speed restriction.

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none

3.4.34. Railway incident occurred on the 25th of September 2013, at 06.55 o'clock, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Braşov, in the railway station Valea Lungă, consisting in the hit and bending of the co-acting support signal post RX4 and of the exit signal post X4, by the opened door of the wagon no.315354716377, the 10th in the consist of the freight train no.32602 (belonging to SNTFM „CFR Marfă” S.A.).

The investigation report was completed on the 17th of October 2013.

**The direct cause** was the accidental opening of the second lateral door (running direction of the train) of the wagon no. 31535471637-7.

**Contributing factors:**

- unsuitable closing of the door from the wagon no. 31535471637-7, notified as running with the lateral device door broken;
- advanced level of fatigue at the safety elements of the lateral door lock.

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none

3.4.35. The railway incident occurred on the 11th of October 2013, at 08:30 o'clock, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Craiova, in the railway station Işalniţa, where the freight train no.61716 (belonging to SNTFM CFR MARFĂ S.A.) was found out with a percentage of non-ensured braked weight.

The investigation report was completed on the 04th of November 2013.

**The direct cause** was the routing on the 11th of October 2013 of the freight train no.61716 from the railway station Drobeta Turnu Severin – Işalnița, with the percentage of braked weight non-ensured.

**Contributing factors:**

- wrong calculation of the necessary braked tonnage, using the percentage of braked weight of 45% instead of 50%, stipulated by the timetable of the respective train;
- lack of checking of the calculation of the necessary braked tonnage for the freight train no.61716.

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none.

3.4.36. The railway incident occurred on the 16th of October 2013, at 19:42 o'clock, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Craiova, in the railway station Slatina, consisting in the departure of the passenger train nr.9476, belonging to SNTFC CFR CĂLĂTORI SA, from the railway station, according to the permissive position of the exit signal, before the external station movements inspector give the signal "train departure", and the train conductor be present in train.

The investigation report was completed on the 20th of December 2013.

**The direct cause** was the departure of the train from the railway station Slatina, without the driver having from the movements inspector of the signal „Train departure”, in order to have the permission to run on the running line and without the compliance with the provisions of the specific regulations.

**Contributing factors** none.

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none.

3.4.37. The railway incident occurred on the 01st of October 2013, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Timișoara, on the open line between the railway stations Ronaț Triaj H. - Ronaț Triaj Grupa D, consisting in the exceeding of the maximum line running speed by the train Regio no.2601. On 884 m the train ran with a speed of 90 km/h, where the maximum line running was 80 km/h. The findings appeared at the reading and interpretation of the locomotive IVMS equipment information.

The investigation report was completed on the 15th of November 2013.

**The direct cause** was the non-compliance with the maximum train running speed stipulated in the working timetable.

**Contributing factors** none.

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none.

3.4.38. The railway incident occurred on the 26th of October 2013, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Brașov, between the railway stations Predeal and Timișul de Sus, consisting in the exceeding of the maximum running speed by the freight train no.91742-1, belonging to SNTFM „CFR Marfă” S.A.

The investigation report was completed on the 29th of November 2013.

**The direct cause** was the non-ensurance of the minimum braked weight percentage accepted for the respective train following the unsuitable position of the changeovers „empty-loaded” (in relation to the loading condition of the wagons) at de 25 wagons from the total of 26 train wagons.

**Contributing factors** none.

**Underlying causes** – none.

**Root causes** - none.

**Safety recommendations** - none

Analysis of the opportunity to add to the Regulations for the train running and railway vehicle shunting no.005/2005 the provisions of the art. 70(13) from the Regulations for the hauling and braking no.006/2005 and art.69(13) from the Instructions for the technical inspection and maintenance of the operated wagons no.250/2005, both of them stipulating:

*„for the freight trains that run on the track sections stipulated at the Annex 12, both in the forming railway stations and in the railway stations before those from the top of the slope, the movements inspector has to compare the data written down in the form „Wagons list” with the situation on site and to check the right position of the changeover levers „empty - loaded”, allowing the train routing only with the ensurance of the braked weight percentage stipulated in the working timetable”*

3.4.39. The railway incident occurred on the 25th of November 2013, in the branch of the Regional Center of Railway Operation, Maintenance and Repairs Galați, in the railway station Cireșu, at the passing of the freight train no.80518, belonging to S.C. GRUP FERVIAR ROMÂN S.A., consisting in the hit of 4 catenary supports by the lateral opened door from the 15th wagon from the locomotive.

The investigation report was completed on the 12th of December 2013.

**The direct cause** was the opening during its running of the first lateral double door, right in the running direction (driver side), wagon no.84535489042-6, the 15th from the locomotive of the freight train no.80518.

**Contributing factors:**

- lateral doors and the main closing shaft distorted, it leading to the closing and ensurance of the doors in straining condition, only in the lower side;
- the handle for the operation of the central closing shaft put straining in the ensurance support;
- the device for the blocking of the handle was out of service (the closing handle lock was blocked).

**Underlying causes:**

Non-compliance with the instruction provisions during the technical inspection along the composition, performed at the freight train no.80518 on the 25th of November.2013, including the wagon no.84535489042-6.

**Root causes** - none.

**Safety recommendations** - none

### 3.5 Accidents and incident investigated along the last 5 years

#### Railway investigations for the period of time 2009-2013:

Investigated accidents <sup>(1)</sup>		2009	2010	2011	2012	2013	TOTAL
Accidents (Art.19, 1 + 2)	Train collisions	-	3	2	-	-	5
	Collisions between trains and obstacles	-	-	-	-	-	-
	Train derailments	3	9	19	20	18	69
	Level crossing accidents	-	-	-	1	-	1
	Person accidents generated by the rolling stock in motion	-	-	-	-	-	-
	Rolling stock fires	-	2	15	2	4	23
	Accidents involving dangerous goods	-	-	-	-	-	-
Other accidents (Art.21.6)	Train collisions	-	-	-	-	-	-
	Collisions between trains and obstacles	-	-	-	-	-	-
	Train derailments	-	-	-	-	-	-
	Level crossing accidents	-	-	-	-	-	-
	Person accidents generated by the rolling stock in motion	-	-	-	-	-	-
	Rolling stock fires	-	-	-	-	-	-
	Accidents involving dangerous goods	-	-	-	-	-	-
<b>Incidents</b>	<b>2</b>	<b>22</b>	<b>29<sup>(2)</sup></b>	<b>16<sup>(3)</sup></b>	<b>17</b>	<b>86</b>	
<b>TOTAL</b>	<b>5</b>	<b>36</b>	<b>65</b>	<b>39</b>	<b>39</b>	<b>184</b>	

<sup>(1)</sup> it was considered the year of the investigation ending;

<sup>(2)</sup> one ended also a structural subsystem failure, not-included in the total number of the incidents ended in 2011;

<sup>(3)</sup> one ended also a failure of a interoperability constituent, not-included in the total number of the ended incidents ended in 2012.

## 4 RECOMMENDATIONS

### 4.1. Recommendations summary and presentation

Through the issued recommendations, Romanian Railway Investigating Body followed the improvement of the railway safety and accident prevention.

No	Involved train/ rolling stock		Place of the railway event			Date of the report publishing	Type of railway event		
	No. of train	Type of train	Occurrence place	Occurrence date	Hour		8	9	
0	1	2	3	4	5	7			8
1.	61723-1	Freight	Between the railway stations Ruginoasa and Târgu Frumos	22.12.2012	05:30	10.07.2013	<b>incident</b>	Exceedin g of the line maximum speed	
		The freight train no.61723-2 belonging to SNTFM „CFR Marfă” S.A., running on the track section Pașcani - Iași, between the railway stations Ruginoasa and Târgu Frumos, gradient 18‰, ran with the speed of 78km/h, exceeding the speed of 50 km/h accepted by the infrastructure. The train consisted in 33 CSI wagons transposed loaded and 2 flat wagons, to ensure coupling the wagons CSI with locomotive.							
		Issued recommendation s	1	Updating of the Order 25/A/206/1975 with the provisions for: <b>a)</b> way to operate the changeovers „Empty-Medium-Loaded” from CSI wagons, transposed loaded, at which the transposing bogies are provided with non-metallic braking blocks with device for the gradual and automatic braking, in proportion to the axle load type AUTOREGIM; <b>b)</b> the way to establish the braked weight for the CSI wagons with bogies equipped with non-metallic braking blocks transposed by the neighbor railways (Moldavia, Ukraine railways, etc.); <b>c)</b> type and characteristics of the automatic brake, that equips now the transposed CSI wagons.					
Safety recommendation in implementing process	1	<ul style="list-style-type: none"> <li>➤ up to this report drawing, one did not receive answer from Romanian Railway Safety Authority concerning the updating of the Order no.25/A/206/1975 ;</li> <li>➤ the railway freight undertaking involved in the incident occidnt, respectively SNTFM „C.F.R. Marfă” - S.A., by the paper nor.E.2.2 / 325 / 11.06.2014 informed the Romanian Railway Investigating Body that, following its measures, achieved the objectives from <b>pct.a)-c)</b>.</li> </ul>							
2.	91742-1	Freight	Between the railway stations Predeal and Timișu de Sus	26.10.2013	00:43	29.11.2013	<b>incident</b>	Exceedin g of the maximum speed stipulated in the working timetable	

		<p>The freight train no.91742-1 belonging to SNTFM „CFR Marfă” S.A., that ran on the track section Predeal - Braşov, between railway station Predeal and Timișu de Sus, on about 13 km, ran with the maximum speed of 87 km/h, exceeding the maximum running speed of 40 km/h stipulated in the working timetable. The train consisted in 26 loaded wagons series Tals</p>	
<p>Issued recommendations</p>	<p>1</p>	<p>Analysis of the opportunity to add to the Regulations for the train running and railway vehicle shunting no. 005/2005 the provisions of the art. 70(13) from the Regulations for the hauling and braking no. 006/2005 and art.69(13) from the Instructions for the technical inspection and maintenance of the operated wagons no.250/2005, both of them stipulating:</p> <p><i>„for the freight trains that run on the track sections stipulated at the Annex 12, both in the forming railway stations and in the railway stations before those from the top of the slope, the movements inspector has to compare the data written down in the form „Wagons list” with the situation on site and to check the right position of the changeover levers „empty - loaded”, allowing the train routing only with the ensurance of the braked weight percentage stipulated in the working timetable”</i></p>	
<p>Non-implemented recommendations <b>(closed)</b></p>	<p>1</p>	<p>➤ Romanian Railway Safety Authority, in the answer submitted by the paper no.2010/300/03.06.2014, considers un-necessary to add to the Regulations for the train running and railway vehicle shunting no. 005/2005 the provisions of the art. 70(13) from the „Regulations for the hauling and braking no.006/2005 and art.69(13) from the Instructions for the technical inspection and maintenance of the operated wagons no.250/2005”.</p>	

**DIRECTOR**  
**Dr. ing. Vasile BELIBOU**