



**ROMANIAN RAILWAY  
INVESTIGATING BODY  
- OIFR -**

**ANNUAL REPORT  
2014**



Until 2006 the causes of the events and accident happened in Romanian railway and metro transport were subject to 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 Minister of Transports' Order no.210/14.03.2000 and the Instructions for the prevention and investigation of the metro events and accidents – M 003 approved by the Minister of Trsnports, Public Works, Transports' Order no.1852/11.01.2002.

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

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

Through this Law, Romanian Railway Authority – AFER was reorganised, Romanian Railway Investigating Body was established as independent body within Romanian Railway Authority, the tasks were established and the railway accidents and incidents investigation 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 Government of a normative act, that regulate this activity and abrogate the Minister of Transports' 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 Minister of Public Works, Transports and Housing's Order no.1852/11.01.2002 for the approval of the Instructions for the prevention and investigation of the metro events and accidents – M 003.

So, on the 17th of February 2010 one adopted Romania Government Decision no.117/2010 on the approval of Regulations for the investigation of the railway accidents and incidents, for the development and improvement of Romanian railway and metro safety, normative act that came into force on 1<sup>st</sup> of May 2010.

The Regulations for accidents and incidents investigation, for development and improvement of Romanian railway and metro safety covers all railway undertakings that perform railway or metro transports:

- a) administrator/administrators of railway infrastructure;
- b) non-interoperable railway infrastructure's managers;
- c) railway undertakings;
- d) economic operators that perform metro transport;
- e) economic operators that get, in leasing or rent, industrial branches connected at the public railway infrastructure and/or at the private railway infrastructure opened to the public traffic;
- f) economic operators that get, in leasing or rent, railway vehicles running on the railway infrastructure;
- g) economic operators that perform activities in relation with the railway transport.

**Within this report one presents Romanian Railway Investigatin Body - OIFR, the role and purpose for its establishment, its organization and the activity carried out during 2014.**

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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 operates 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.1561/1<sup>st</sup> of November 2006 for the amendment of the Government Decision no.626/1998 concerning the organisation 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 interests 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 the Regulation for the investigation of the railway accidents and incidents was approved, the development and improvement of Romanian railway and metro safety and 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' Order no.1852 from the 11<sup>th</sup> of January 2002 for the approval of the Instructions for the prevention and investigation of the metro events and accidents – M 003 were cancelled.

Taking into account the justified notification of European Commission in the cause no.2012/2219, through which European Commission considered that Romania did not meet with the obligations stipulated at the art.23, paragraph (1) from the Directive 2004/49/EC, Romanian Government adopted the emergency ordinance no.33 from the 30<sup>th</sup> of June 2015 through which a series of changes at the specific national legislation is made. According to the provisions of the art. 9<sup>1</sup>, paragraph (1) Romanian Railway Investigation Agency, hereinafter referred as AGIFER is set up, being the specialized body subordinated to the Ministry of Transports, public legal institution, totally financed from own funds, reorganized by partial division of Romanian Railway Authority / AFER and taking over from AFER the activity, staff and assets afferent to Romanian Railway Investigating Body, the Regulations for the organization and functioning of AGIFER following to be approved by Government Decision.

## 1.2 Role and purpose

Romanian Railway Investigating Body (OIFR) 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 investigations and to make analyzes and studies on the causes and circumstances that led at their occurrence. OIFR can also perform other tasks established by Government Decision for the investigation of 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.117/02nd of March 2010 through which the Regulations for the investigation of the railway accidents and incidents was approved, for the development and improvement of Romanian railway and metro safety (hereinafter referred to as *Investigation Regulations*), Romanian Railway Investigation Body takes into account in its decision making the next:

- the seriousness of the accident or the incident;
- if its is part of a series of relevant accident or incidents for the whole system;
- its impact on community railway safety;
- 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 wich are not relevant for the railway system;
- collisions between running trains and road vehicles at the level crossings, that were not generated by the non-closing of barriers ar by the unsuitable working of the signalling system;
- hitting of the persons by the railway vehicles in motion;
- cases of suicid.

With the mention that for any of this cases one can perform investigation taking into account the above mentioned.

### Purpose followed by Romanian Railway Investigating Body

Through the railway accidents and incidents investigations, Romanian Railway Investigating Body aims to improve the railway safety and to prevent similar accidents or incidents.

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

Romanian Railway Investigating Body investigates only those accidents covered by its purpose.

## 1.3 General data about OIFR

### Staff hired at the end of 2014

OIFR has 28 employees, from which:

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

Besides this staff, within AFER, one employee from each of the compartments Human Resources, Economic and Legal compartments, is appointed to perform these necessary activities for OIFR.

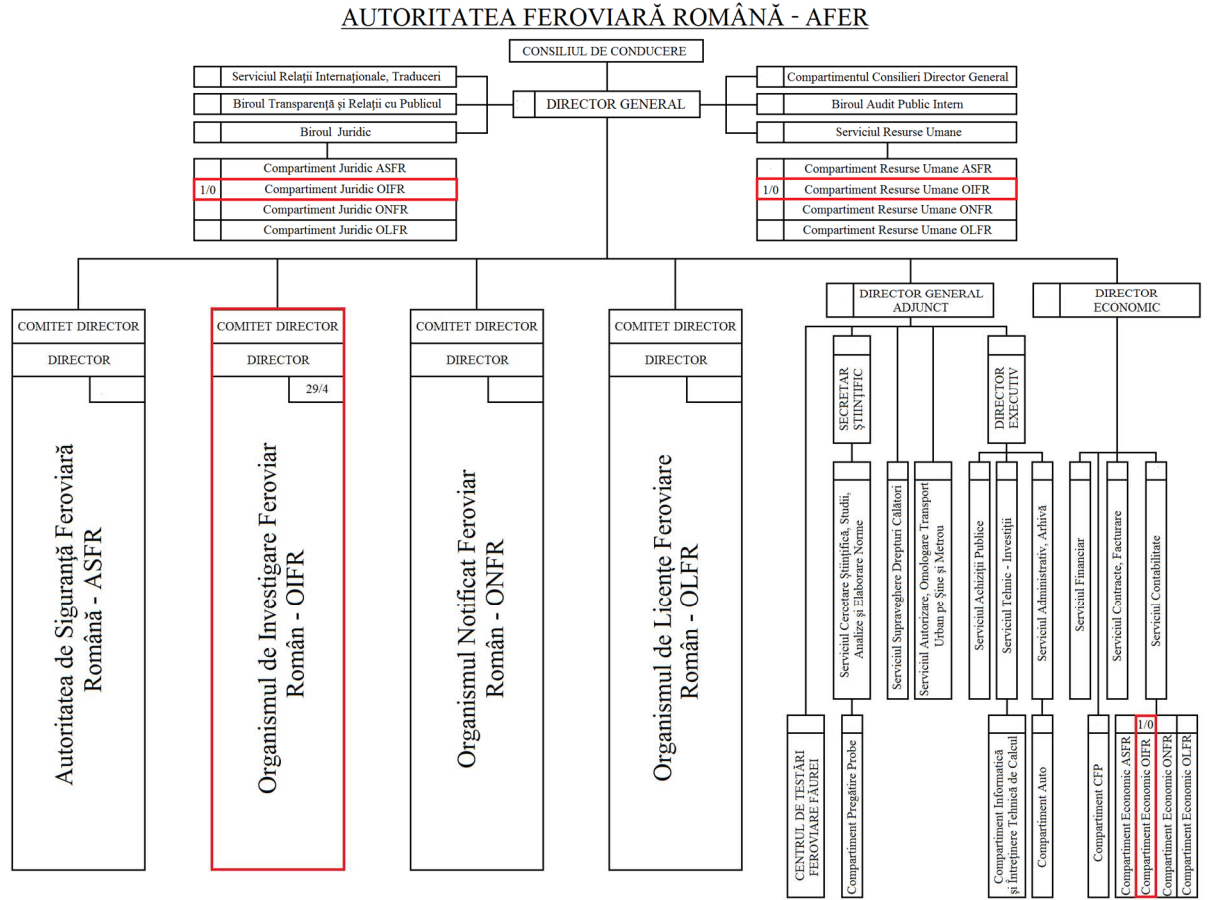
### Allocated budget

In 2014, for its activities, OIFR had an allocated budget of 2.563.696 lei, that is 569.710 EUR (taking into account thge reference 1 EUR=4,5 RON).

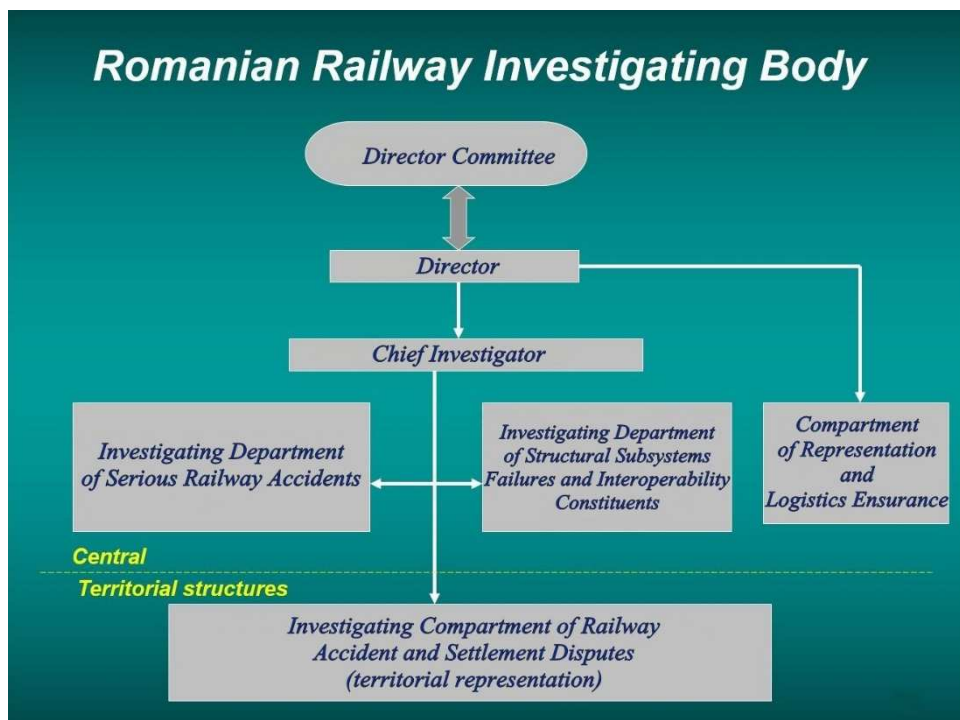


### 1.4 Organization

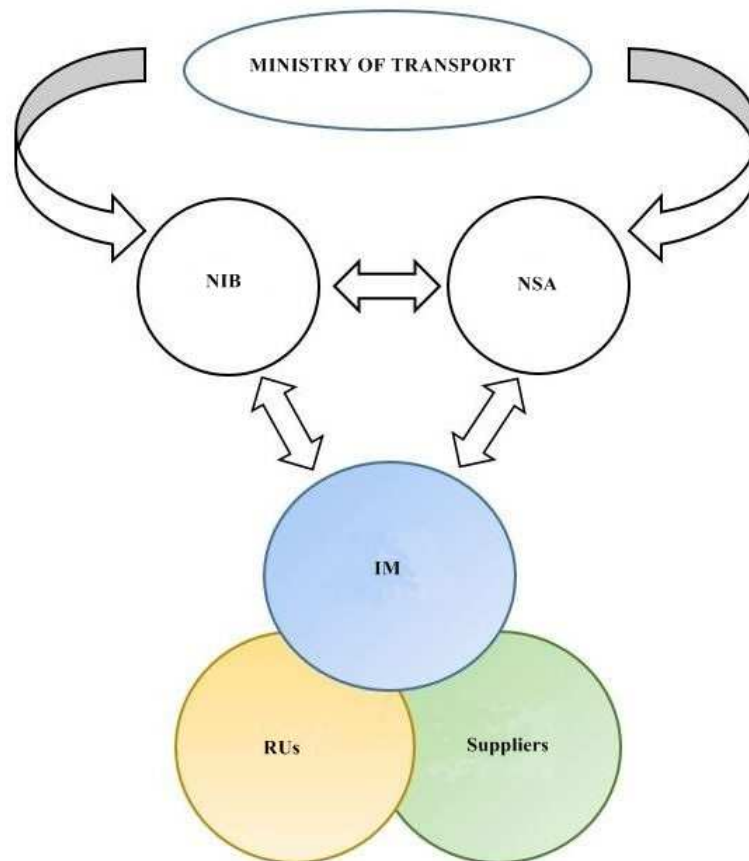
In 2014, through the Minister of Transport's Order no.1260/21.08.2014 the organization structure of Romanian Railway Authority – AFER was changed, and implicitly of OIFR, by the clear allocation of staff from AFER compartments of Human Resources, Economic and Legal for those 4 independent bodies, AFER organization chart, having emphasized OIFR, is bellow presented:



OIFR inner organization 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 inquiry. The investigation does not aim in any way the establishment of the degree of guilty 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 express their comments on the information of the draft report.

If the opinions and comments from the draft report are relevant for the investigation, they will be taken into account in the drawing up of the final report.

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

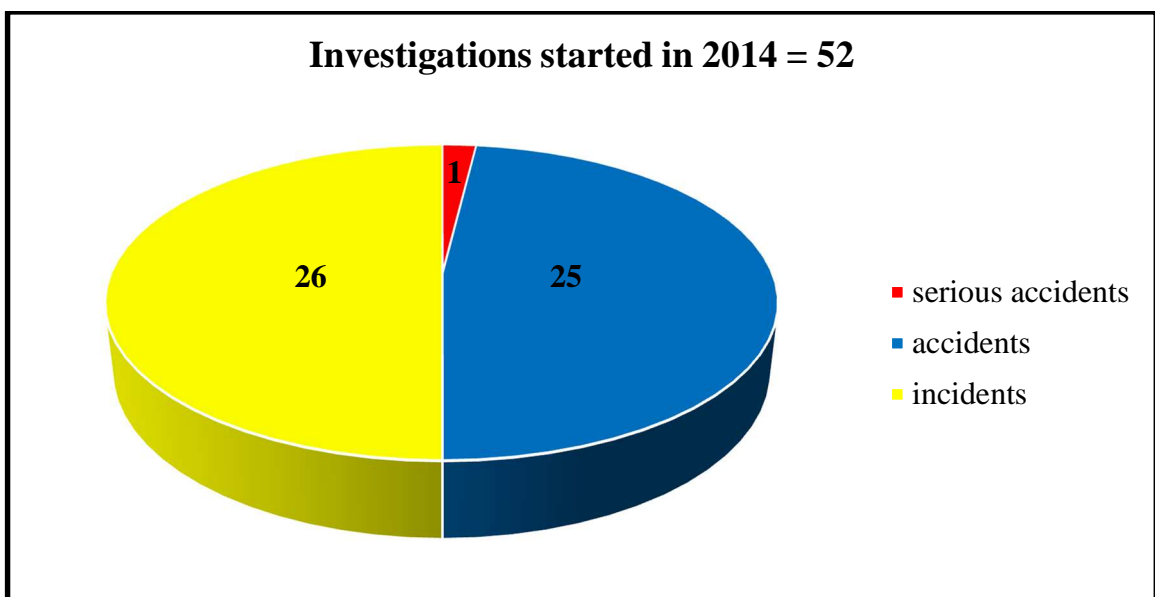
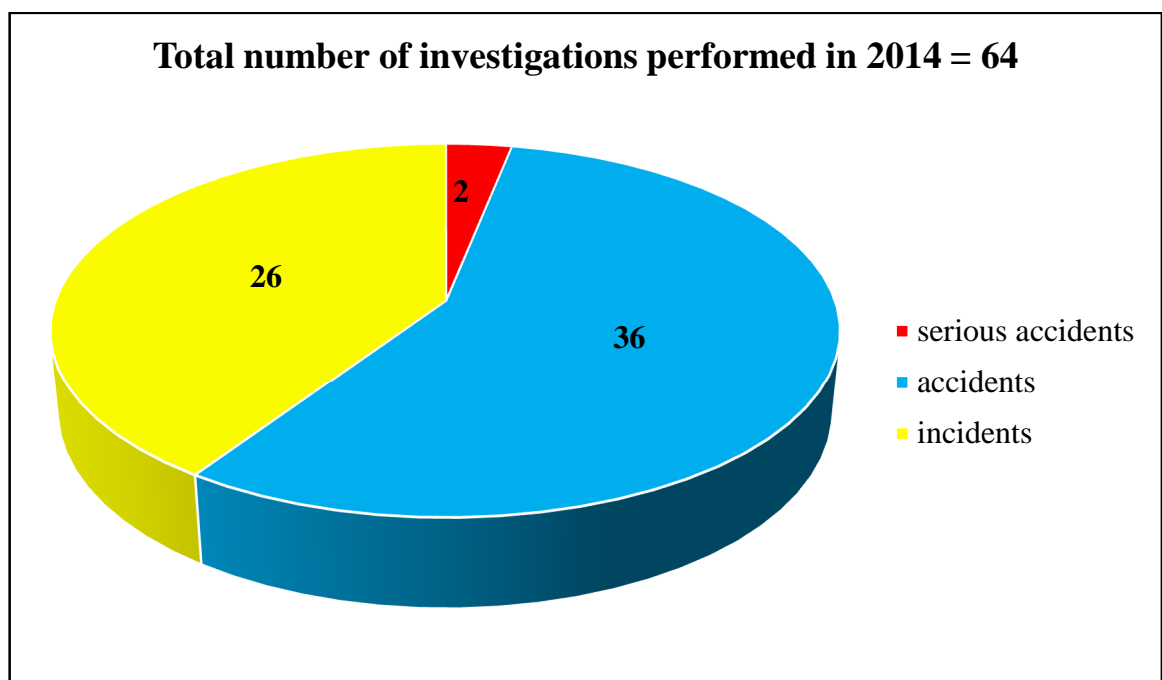
## 2.1 Investigated cases

During 2014, Romanian Railway Investigating Body, taking into account the seriousness of the railway accidents/incidents, including technical failures of the structural subsystems, happened on Romanian railway and metro network and their impact on the railway safety, according to the provisions of the art.19, paragraph (1) and (2) of the Law no.55/2006 concerning the railway safety, considered necessary to start 52 investigations.

From these in 2014, 27 investigations were finished, for one the investigation was closed following the readmission according to the preliminary findings, and 24 investigations have been finished during 2014.

In 2014, 12 investigations, that were begin in 2013, were also finished, so the total number of investigations completed in 2014 was 39.

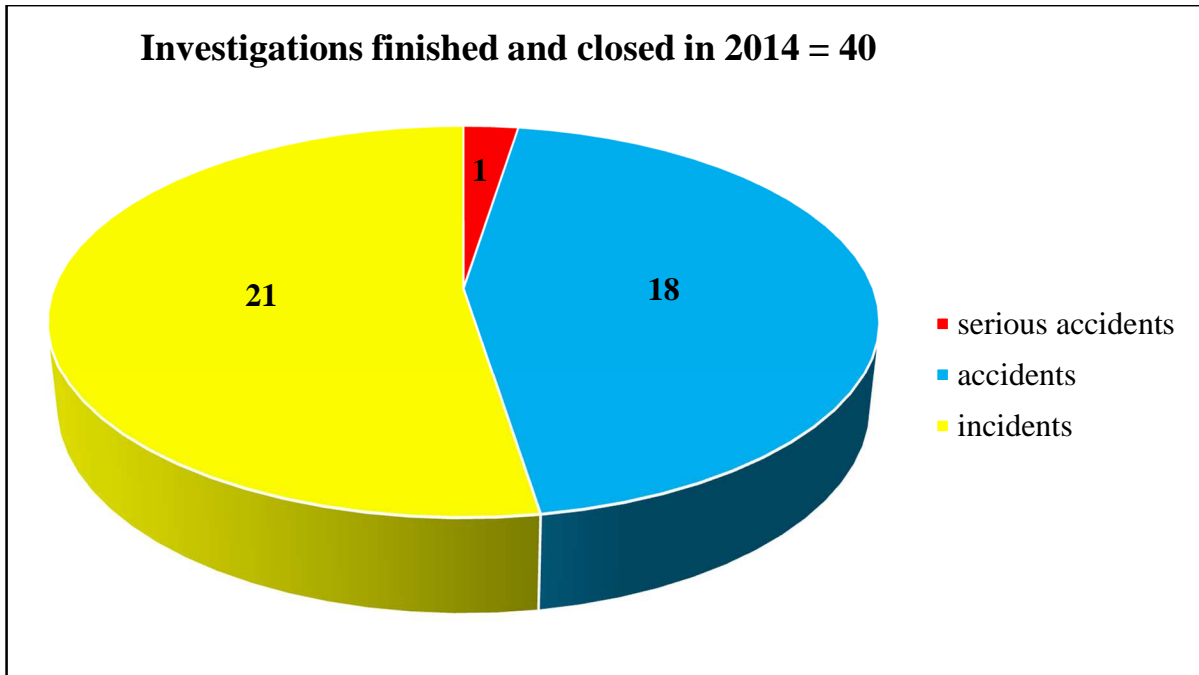
- investigations started in 2013 – finished and closed in 2014	= 12
- investigations started in 2014 – finished and closed in 2014	= 28
- investigations started in 2014 – finished in 2015	= 24
<b>Total investigations performed in 2014</b>	<b>= 64</b>





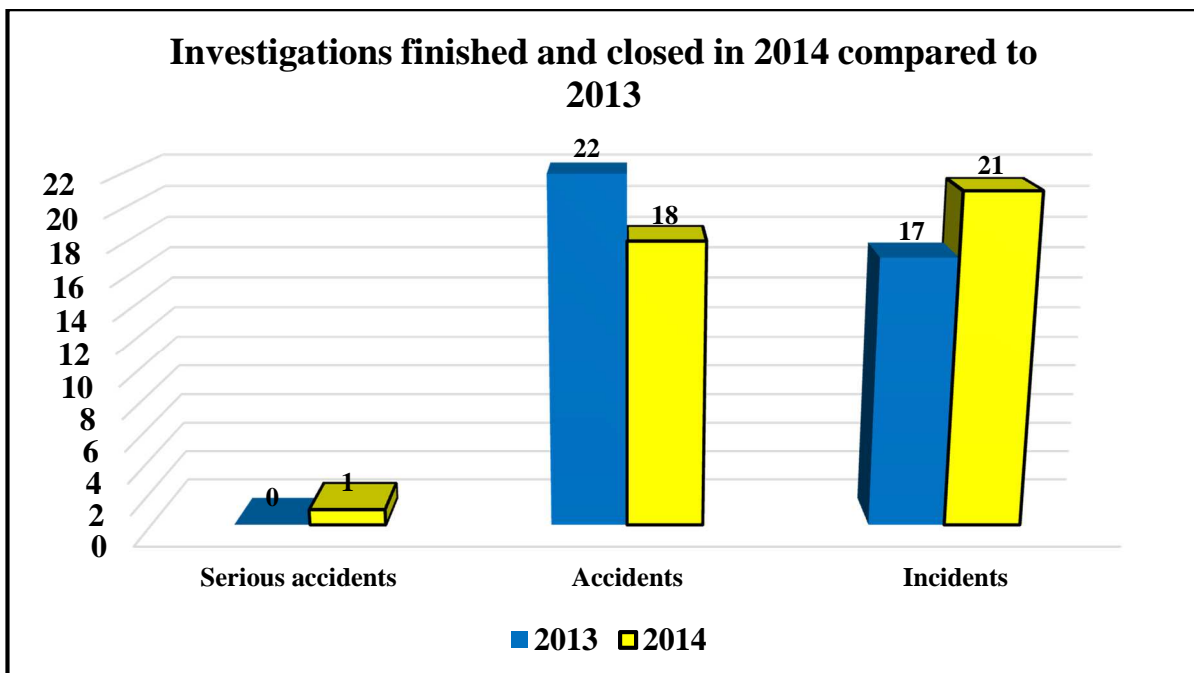
**Investigations finished and closed in 2014**

- serious accidents = 40, as follows: = 1
- accidents = 18, as follows:
  - ✓ collisions = 0
  - ✓ derailments = 16
  - ✓ level crossing hitting = 1
  - ✓ fires = 1
- incidents = 21
- technical failure of the structural subsystems or of interoperability constituents = 0



The time for publishing the investigations did not exceed 12 months, stipulated in the Law no. 55/2006, concerning the traffic safety and by the provisions of the Regulations for the accident and incident investigation, development and improvement of Romanian railway and metro safety.

Compared to the previous year, the finished and closed investigations are as follows:

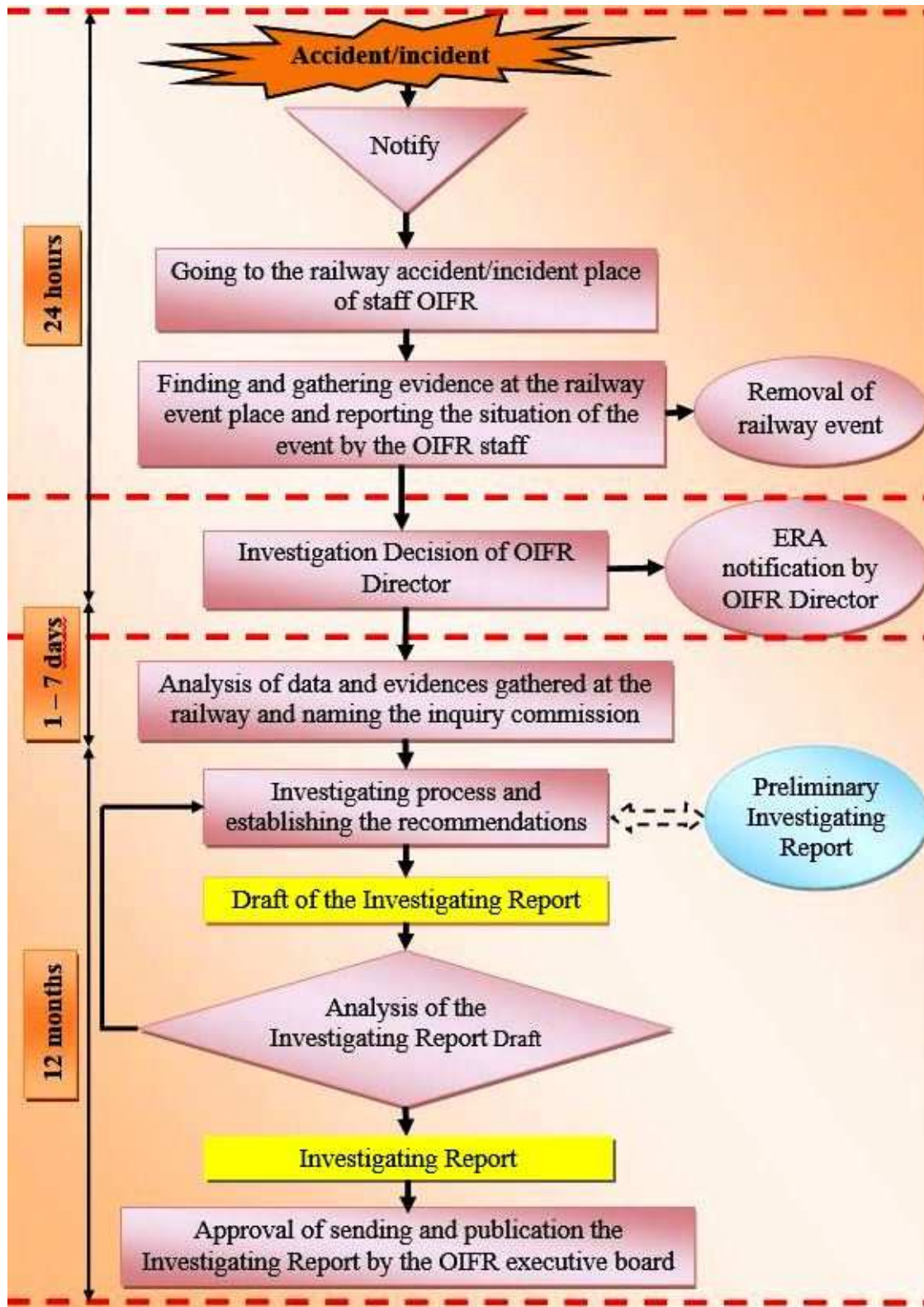


## 2.2 Institutions involved in the investigation (currently or exceptionally)

From its setting up 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, specialists from related fields. During 2014 was not necessary to apply the provisions of this article, in the performed investigations being not necessary to use specialists from related fields.

## 2.3 Investigation process



### 3 INVESTIGATIONS

#### 3.1 General overview on the finished investigations in 2014 compared with 2013, identification of the main tendencies.

Type of accidents investigated in 2014 <sup>(1)</sup>	Number of accidents	Number of victims		Damages (lei)	Damages (€)	The trend compared with 2013 of the accident number
		Deaths	Seriously injured			
Train collisions	1	-	13	2795,05	618,8 €	+1 (+100%)
Train derailments	16	-	-	1.538.866,48	343.529,80 €	-2 (-11%)
Hits of road vehicles at the level crossing	1	-	-	1230,94	280,59 €	+1 (+100%)
Rolling stocks fires	1	-	-	387.289,2	85.871,53 €	-3 (-75%)
<b>TOTAL</b>	<b>19</b>	<b>0</b>	<b>13</b>	<b>1.930.181,67</b>	<b>430.300,72 €</b>	<b>-3 (-14%)</b>
<b>Total damages in euro (about)</b>						

<sup>(1)</sup> one took into account the year when the investigation was finished.

#### 3.2. Finished and started investigations in 2014

In 2014 Romanian Railway Investigating Body finished and published 39 investigation reports (from which 12 were investigations started in 2013) and started the investigation procedure for 24 cases for which the investigations that were undertaken in 2014 are to be finished in 2015. For the analyzed period of time, in 1 case the investigation was closed because the readmission generated by the preliminary findings.

In the table bellow are presented the investigations and the legal basis for their performance, taking into account the requirements of European Directive on the railway safety and the national legislation.

#### Finished investigations in 2014

No.	The date of occurrence	Description	Legal basis for the investigation <sup>(1)</sup>	Concluding date
1	02.02.2013	In the branch of railway county Timișoara, track section Simeria - Livezeni (electrified double-track line), <b>in the railway station Pui</b> , in the running of the freight train no.23817 (belonging to the railway freight undertaking SNTFM „CFR Marfă” SA), the last 2 wagons of the train derailed, following the circular fracture of the membrane from the wheel no.2 of the wagon no.815366558758 (provided with cast wheels).	<b>i</b>	21.01.2014

2	08.05.2013	In the branch of the railway county Cluj, <b>between the railway stations Fiad and Telciu</b> , in the running of the freight train no.43622, belonging to the railway freight undertaking SNTFM "CFR Marfă" SA 9 wagons loaded with logs derailed (3 wagons turned over and other six derailed).	i	07.04.2014
3	02.09.2013	In the branch of the railway county Cluj, <b>between the railway stations Barcău and Șimleu Sivaniei</b> , km. 53+500, in the running of the freight train no.89435, belonging to the railway undertaking SC GRUP FERROVIAR ROMÂN SA, the first bogie of the wagon no.335379915549 (the 12th in the forming of the train – loaded with crude oil, without leakages), in the running direction, derailed.	i	16.01.2014
4	24.09.2013	In the branch of the railway county Brașov, <b>in the railway station Cătușa</b> , at the crossing over the interlocked switch no.6, of the freight train no.76059, belonging to the railway undertaking SNTFM „CFR Marfă” SA, one bogie of the last train wagon derailed.	i	09.01.2014
5	27.09.2013	In the branch of the railway county Cluj, railway station <b>Reteag</b> , in the running of the freight train no.89441, belonging to the railway undertaking SC Grup Feroviar Român S.A., the first bogie of the second wagon from the locomotive, in the running direction, derailed.	i	13.01.2014
6	04.10.2013	In the branch of the railway county Cluj, <b>between the railway stations Suplacu de Barcău and Șimleu Silvaniei</b> (non-interoperable track section managed by SC APRIA SRL), km.53+730, in the running of the freight train no.89401, belonging to the railway undertaking SC Grup Feroviar Român SA, the first bogie of the 18th train wagon, in the running direction, derailed.	i	19.02.2014
7	16.10.2013	In the branch of the railway county Cluj, <b>between the railway stations Monor Gledin and Râpa de Jos</b> , km.33+300, the train no. 48924 (tower wagon DP 58 belonging to LC Saratel), running between Saratel and Rapa de Jos overtook and hit the last wagon of the freight train no.50473-2 (belonging to the railway undertaking S.C. Unicom Tranzit S.A.). Following the impact the second axle of the tower wagon, in the running direction, derailed, 16 persons from the tower wagon were injured.	i	03.03.2014
8	20.11.2013	In the branch of the railway county Craiova, <b>between the railway stations Valea Albă and Balota</b> , la km 347+200, in the running of the freight train no.31710, belonging to the railway undertaking SNTFM "CFR Marfă" SA, one bogie of the 8th train wagon derailed.	i	31.01.2014

9	02.12.2013	In the branch of the railway county Craiova, <b>between the railway stations Zlătărei and Drăgășani</b> , km 234+800, a fire bursted in the locomotive DA 875 from the freight train no.22002-1 (belonging to the railway undertaking SNTFM "CFR Marfă" SA).	i	24.02.2014
10	04.12.2013	In the branch of the railway county Brașov, <b>between the railway stations Praid and Sovata</b> (non-interoperable track managed by SC RC-CF Trans SRL), at the level crossing from km 109+410, provided with road sign and and mechanical barrier, in the running of the passenger train no.14630 (belonging to the railway undertaking SC REGIOTRANS SRL), the car no.AG-87-BCE hit the motorised train no.4503, leading to the derailment of one axle of trailer vehicle, injury of the car driver and the car damage.	i	30.06.2014
11	09.12.2013	In the branch of the railway county 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 undertaking DB SCHENKER RAIL ROMÂNIA SRL, two wagons derailed, respectively the both axles of the 5th wagon and the second axle of the 6th wagon, in the running direction.	i	05.03.2014
12	21.12.2013	In the branch of the railway county Brașov, <b>between the railway stations Mureni and Vânători</b> , track I, km.282+600, in the running of the freight train no.32603, belonging to the undertaking SNTFM "CFR Marfă" SA, the first axle of the hauling locomotive EA 745, in the running direction, derailed.	i	19.03.2014
13	09.01.2014	In the branch of the railway county Brașov, <b>between the railway stations Brașov Triaj and Dârste</b> , km.169+100, in the running of the freight train no.51740, belonging to the undertaking SNTFM "CFR Marfă" SA, the first axle of the 9th wagon, in the running direction, derailed.	i	28.03.2014
14	18.01.2014	In the branch of the railway county Timișoara, <b>in the railway station Aradu Nou</b> , km 51+570, the cold locomotive ED 016-9 (belonging to Depot Craiova) running as train no.L 27501, in stopping condition, the driver put it in motion, without having this right. It led at the passing of the exit signal X5 in stop position and the trailing of the switches 14-12, entering on the route of the train 78-1, followed by the derailment of those 3 axles of the bogie 2, in the running direction.	i	31.03.2014
15	27.01.2014	In the branch of the railway county Timișoara, <b>in the railway station Hunedoara</b> , double slip area TJD 49/51, km 15+350, in the running of the passenger train no.14269, consisting in 3	i	07.03.2014



		motorised cars RIO-004 and locomotive BB-523 at the rear of the train, belonging to the railway undertaking SC REGIOTRANS SRL, the last bogie of the 3rd car no.57-3353-0 derailed (in the running direction) and the first bogie of the locomotive BB-523 derailed too (in the running direction).		
16	01.02.2014	In the branch of the railway county București, <b>in the railway station Ploiești Sud</b> , after the entrance of the train on the track 7, in the running of the freight train no.30638-1, belonging to the undertaking DB SCHENKER RAIL ROMÂNIA SRL, the first axle of the locomotive no.91530471003-0 derailed, in the running direction.	i	25.02.2014
17	02.02.2014	In the branch of the railway county Galați, <b>in the railway station C.A. Rosetti</b> , in the running of the freight train no.20936 belonging to the railway undertaking CARGO TRANS VAGON S.A., an open door from the 7th wagon hit 4 contact wire pillars.	i	19.02.2014
18	03.02.2014	In the branch of the railway county Galați, <b>in the railway station Barboși Triaș</b> , at the entrance of the train on the track 0D, in the running of the freight train no.89543, belonging to the undertaking SC Grup Feroviar Român SA, one bogie from the each of the wagons 31 and 35 derailed.	i	24.03.2014
19	06.02.2014	In the branch of the railway county Constanța, <b>in the railway station Palas</b> , in the running of the freight train no.L87967, belonging to the undertaking SNTFM "CFR Marfă"SA, one made an wrong exit route for the train, followed by the trailling of the switch no.22.	i	25.02.2014
20	15.02.2014	In the branch of the railway county Iași, <b>between the railway stations Târgu Frumos and Ruginoasa</b> , Km 18+500, in the running of the passenger train no.R 5601, belonging to the railway undertaking SNTFC "CFR Călători" SA, the hauling locomotive EA 929 hit the inductor of 1000/2000Hz afferent to the signal Bl 113.	i	07.03.2014
21	17.02.2014	In the branch of the railway county Brașov, <b>between the railway stations Valea Lungă and Micăsasa</b> , Km 361+500, track II, in the running of the freight train no.50472, belonging to the railway undertaking SC UNICOM TRANZIT SA, it hit the bulldozer belonging to SC ARCADE SA, that performed works on the track I, part of the modernization works from the pan-European IV corridor.	i	20.03.2014
22	20.02.2014	In the branch of the railway county Craiova, <b>in the the railway station Vlăduțeni</b> , track II, in the running of the freight train no.50490-1, belonging	i	31.03.2014

		to the railway undertaking SC UNICOM TRANZIT SA, the shunting limit signal and the exit semaphore on „stop” position were passed on stop position.		
23	10.03.2014	In the branch of the railway county Constanța, in the running of the work train no.88395 consisting in the gang cars format DCL 033 and DCL 007, belonging to CNCF „CFR” SA, <b>between the railway stations Palas and Constanța Mărfuri</b> (non-interoperable track section managed by SC GFR SA), km 1+200, sthe first axle of the gang car DCL 033, in the running direction, derailed.	i	29.08.2014
24	27.03.2014	In the branch of the railway county Timișoara, track section Simeria - Subcetate (electrified double-track line), in the railway station <b>Bretea Streiului</b> , on the direct line III, closed for maintenance works, the ballast screener MCB 057, coupled to the technological wagon no.40539530064-4 and to a hydraulic vehicle for the rail lifting (belonging to SC Întreținere Mecanizată a Căii Ferate SA - SIMC Timișoara), started to run, passing the shunting limit signal on stop position and entering on the track I, to the railway station Călan Băi	i	28.05.2014
25	31.03.2014	In the branch of the railway county Iasi, <b>between the railway stations Dolhasca-km.407+600, Lespezi-km.396+300 and Pașcani-km.387+00 - 385+800</b> , in the running of the freight train no.94688, belonging to the railway undertaking SNTFM "CFR Marfă" SA, the pegs and the equipments afferent to the track sections 4-8(Lespezi), SI026, 4C, 28-30, 2C, 4C-7C (Pașcani) SI 4-8 were hit by the plank of the wagon no. 21533316116-8, the 13th of the train.	i	22.04.2014
26	08.04.2014	In the branch of the railway county Timișoara, <b>in the railway station Timișoara Nord</b> , in the running of the passenger train no.9613-2, belonging to the undertaking SNTFC "CFR Calatori" SA, one made the entry route in the railway station on the closed double track line, from Timișoara Sud and the crossing over the switch no.4 with access to the part of the closed line.	i	30.04.2014
27	13.04.2014	In the branch of the railway county Timișoara, track section Brașov – Ploiești Vest (electrified double-track line), <b>between the railway stations Predeal and Timișul de Sus</b> , on the track I, in the running of the freight train no.50406-1 (belonging to the railway undertaking SC Unicom Tranzit SA București) the maximum accepted speed was exceeded.	i	03.12.2014
28	14.04.2014	In the branch of the railway county Brașov, track section Sighișoara-Copșa Mică (electrified	i	08.05.2014

		double-track line), on the track II, <b>between the railway stations Ațel and Mediaș</b> , in the running of the regio passenger train no.3501, (belonging to the railway undertaking SNTFC "CFR Calatori" SA), the locomotive EA 236 (belonging to the Depot Brasov) hit a track machine that was performing works on the pan-European IV corridor and being in the structure clearance.		
29	08.05.2014	In the branch of the railway county Craiova, <b>between the railway stations Ișalnița and Coțofeni</b> , km 264+000, in the running of the freight train no.93849, belonging to the railway undertaking SNTFM "CFR Marfă" SA, the first bogie from the 9th wagon from the rear of the train, in the running direction, derailed.	i	29.09.2014
30	02.06.2014	In the branch of the railway county Craiova, <b>between the railway stations Roșiori Est and Roșiori Nord</b> , in the running of the passenger train no.9358, belonging to the railway undertaking SNTC "CFR Călători" SA, the motorised train AM 764 passed the signal YU in stop position, following the change of its position from yellow in red.	i	04.07.2014
31	26.06.2014	In the branch of the railway county Cluj, <b>between the railway stations Beclean pe Someș and Bistrița Nord</b> , in the running of the train no.48364, consisting in the track machine MP 135-004, the inductors of 1000/2000 Hz and 500 Hz, from the right side of the running direction Beclean pe Someș - Bistrița Nord were hit	i	15.07.2014
32	12.08.2014	In the branch of the railway county Constanța, <b>in the railway station Fetești</b> , the freight train no.21737 (belonging to the railway undertaking SNTFM „CFR Marfă” SA) one found out a braked weight percentage non-ensured, following the non-instruction position of the changeovers empty / loaded at 8 wagons of the train, train routed from the railway station Pogoanele.	i	30.09.2014
33	28.08.2014	In the branch of the railway county Craiova, <b>between the railway stations Banu Mărăcine and Craiova</b> , km.207+287, on the track 1, the co-acting signal RXBF of the entry signal XBF was hit by the freight train no. 20302-1 (belonging to the railway undertaking SC Rail Cargo Romania SRL)	i	02.10.2014
34	24.09.2014	In the branch of the railway county Cluj, <b>in the railway station Halmeu</b> , track 7 wide gauge, in the running of freight train no.48651/3651, consisting in 17 loaded wagons for wide gauge, hauled by the locomotive DA 1920 (belonging to the Ukrainian railways – UZ) the second bogie of the last wagon of the train derailed , in the running direction.	i	22.12.2014

35	12.10.2014	In the branch of the railway county Craiova, track section Piatra Olt - Băbeni (non-electrified single-track line), <b>in the railway station Drăgășani</b> , the exit signal on „stop” position was passed and the switch no. 2 bursted open, with the breaking of the point of switch tongue, by the freight train no.60802-1 (belonging to the railway undertaking SC TRANSFEROVIAR GRUP SA).	i	13.12.2014
36	14.10.2014	In the branch of the railway county Brașov, <b>between the railway stations Daneș and Dumbrăveni</b> , on the track II, km.309+900, the passenger train no. 1530 (belonging to the railway undertaking SNTFC „CFR Călători” SA) hit the open door of a truck from the worksite FCC AZVI STRACO.	i	02.12.2014
37	23.10.2014	In the branch of the railway county București, <b>between the railway stations București Nord and Mogoșoaia</b> , in the running of the passenger train no.15073 (belonging to the railway undertaking SC Transferoviar Călători SRL), the accepted maximum speed was exceeded.	i	26.11.2014
38	09.11.2014	In the branch of the railway county Galați, track section Făurei – Galați (electrified double-track line), <b>in the railway station Făurei</b> , the accepted maximum speed was exceeded at the dispatching of the passenger train no.15073, belonging to the railway undertaking SC Transferoviar Călători SRL, from the line 2 of the railway station.	i	20.12.2014
39	30.11.2014	In the branch of the railway county Constanța, <b>in the railway station Lehliu</b> , in the running of the passenger train no.1986 (belonging to the railway undertaking SNTFC „CFR Călători” SA), the equipment DAM and the sleepers afferent to the switch no. 3 were hit because the fall of the part SAB from the axle no.3 of the locomotive EA 613.	i	16.12.2014
40	23.06.2014	In the branch of the railway county Constanța, <b>between the railway stations Saligny and Cernavodă Pod</b> , km.170+270 – 170+350, in the running of the freight train n0.30686 (belonging to the railway undertaking DB SCHENKER RAIL ROMÂNIA SRL), 10 bridge coverings were hit and other 2 were pulled out because a wire pale fell from the 8 <sup>th</sup> wagon from the locomotive, following the opening of a door.	i	Investigation was stopped on the 2nd of July 2014

(1) **The legal basis of the investigation:** i = In accordance with the Safety Directive, ii = in accordance with 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 2014 and that are to finalize in 2015

No.	Occurrence date	Description	The legal basis of the investigation	Finalization date
1	14.03.2014	In the branch of the railway county Constanța, <b>between the railway stations Constanța Mărfuri and Palas</b> , km 0+950, the first axle of the gang car DCL 007 derailed (belonging to CNCFR „CFR” SA), running as freight train no.88396.	i	21.01.2015
2	07.05.2014	In the branch of the railway county Timișoara, in the running of the regio passenger train no.9612, consisting in AM 979, belonging to the railway undertaking SNTFC "CFR Călători" SA, <b>in the railway station Timișoara Nord</b> , track 124, km.1+750, the first axle in the running direction, right wheel, of the motorised train, derailed.	i	16.02.2015
3	02.08.2014	In the branch of the railway county Galați, <b>railway station Cotești</b> , in the running of the freight train no.60842-1, belonging to SC TRANS FERROVIAR GRUP SA, the entry signal X was passed on stop position, followed by the violent collision with a group of heavy track vehicles, belonging to SIMC Buzău, parked, ensured against the runaway and signaled according the instruction on the direct line III. Following the collision an employee of SC IMCF SA-Section IMC Buzău was injured and generated the next damages: <ul style="list-style-type: none"> <li>• derailment and damage of the hauling locomotive (locomotiva EA 389);</li> <li>• derailment and damage of 2 heavy track vehicle (ballast plough SSP-813 și machine for packing and track liner Plasser-08);</li> <li>• complet destruction of a the technological wagon;</li> <li>• damage of the ballast screener RM 08-275.</li> </ul>	i	31.03.2015
4	04.08.2014	In the branch of the railway county Brașov, track section Brașov – Vânători (electrified double-track line), <b>railway station Augustin</b> , in the running of the freight train no.50427-2, belonging to the railway undertaking SC Unicom Tranzit SA, the first axle of the banking locomotive EA 531 derailed, after crossing over the switch no.1.	i	31.03.2015
5	22.08.2014	In the branch of the railway county Brașov, <b>between the railway stations Izvoru Mureșului and Voșlobeni</b> , km.138+200, in the running of the freight train no.51713-2, belonging to the railway freight undertaking SNTFM "CFR MARFĂ" S.A., hauled with the locomotives EA 883 și EA 572 (banking one), the axle no. 6 of the banking locomotive EA 572 derailed.	i	09.03.2015
6	28.08.2014	In the branch of the railway county Brașov, <b>between the railway station Izvoru Mureșului</b>	i	07.05.2015



		<b>and Voşlobeni</b> , km.138+200, in the running of the freight train no.41755-2, belonging to the railway freight undertaking SNTFM "CFR MARFĂ" S.A., hauled by the locomotives EA 740 and locomotive EA 020 (banking one), the first bogie of the 16 <sup>th</sup> wagon of the train, in the running direction, derailed.		
7	05.09.2014	In the branch of the railway county Craiova, non-interoperable line Băbeni – Alunu, managed by SC RC-CF TRANS SRL Braşov, <b>between the railway stations Băbeni and Popeşti</b> , in the running of the freight train no.23688 (belonging to the railway undertaking SNTFM "CFR Marfă" SA) consisting in 25 wagons loaded with coal, hauled by 2 locomotives in front of the train (locomotive DA 1277 and locomotive DA 682) and with banking locomotive DA 1174, in the area of the km 15+025, 6 wagons derailed.	i	24.06.2015
8	07.09.2014	In the branch of the railway county Constanţa, in the running of the freight train no.89617, belonging to the railway undertaking SC Grup Feroviar Român SA, at the crossing over the switch no.17, <b>in the railway station Constanţa Mărfuri</b> , one bogie of each from the first two wagons derailed.	i	13.03.2015
9	19.09.2014	In the branch of the railway county Iaşi, <b>in the railway station Valea Seacă</b> , at the level crossing from km 292+05, provided with automatic road signaling system without half-barriers – type SAT, 0, the passenger train no.1753 (belonging to the railway passenger undertaking SNTFC „CFR Călători” SA) hit a road train, generating the death of the road train driver, of the locomotive driver and the derailment of both bogies of the first wagon.	i	Investigation in progress
10	19.10.2014	In the branch of the railway county Braşov, km 265+967, <b>between the railway stations Mureni and Beia</b> , the freight train no.80068, belonging to the railway undertaking SC SNTFM „CFR Marfă” SA. passed the caution signal YF afferent to the railway station Beia, closed, on stop position	i	14.01.2015
11	30.10.2014	In the branch of the railway county Cluj, <b>in the railway station Telechiu</b> , the passenger train no.367-2, belonging to the railway undertaking SC SNTFC „CFR Călători” SA. passed the entry signal Y (closed) and the exit signal Y1 (closed ) on stop position	i	05.01.2015
12	30.10.2014	In the branch of the railway county Timișoara, km 400+410, <b>between the railway stations Topleţ and Băile Herculane</b> , in the running of the passenger train no.1691, belonging to the railway undertaking SNTFC „CFR Călători” SA, the first 3 wagons derailed.	i	Investigation in progress
13	04.11.2014	In the branch of the railway county Timișoara, track section Petroşani – Simeria (electrified double-	i	Investigation in progress

		track line), on the track I, km 60+430, <b>between the railway stations Merișor and Crivadia</b> , in the running of the freight train no.23815, belonging to the railway undertaking SNTFM „CFR Marfă” SA, the first bogie from the 4 <sup>th</sup> wagon, in the running direction, derailed.		
14	10.11.2014	In the branch of the railway county Craiova, <b>in the railway station Gilort</b> , the cold locomotive EA 476 (belonging to SNTFM „CFR Marfă” SA) passed the exit signal Y1 on stop position, its permissive position (green) changed soon in non-permissive position (red), ordering stop, and continued to run without the driver receive the running order in this respect.	i	08.01.2015
15	19.11.2014	In the branch of the railway county Timișoara, track section Simeria – Șibot (electrified double-track line), <b>between the railway stations Simeria Triaj and Turdaș</b> , at the dispatching of the freight train no.50480, belonging to the railway undertaking UNICOM TRANZIT SA, all the axles from the first wagon, in the running direction, derailed, at the crossing over the switch no.7, after passing the signal YTj on stop position, (it being on stop position).	i	23.06.2015
16	23.11.2014	In the branch of the railway county Galați, <b>in the railway station Cătușa</b> belonging to SC Arcelor Mittal Stell, line 1CL (wide gauge), at the arrival of the train 76058 CL (belonging to the railway undertaking SC UNICOM TRANZIT SA), hauled by the locomotive DAL 1112 (belonging to the railway undertaking SNTFM „CFR Marfă” SA), one bogie of the 3 <sup>rd</sup> wagon (CSI loaded), from the rear of the train, in the running direction, over the switch no.6CL.	i	24.03.2015
17	30.11.2015	In the branch of the railway county Galați, <b>between the railway station Filești and plant railway station Cătușa</b> (wide gauge), km.2+700, in the running of the freight train no.76052 (belonging to SNTFM „CFR Marfă” SA), the both bogies of the 3 <sup>rd</sup> , 4 <sup>th</sup> CSI loaded wagons, from the locomotive, derailed, and the first bogie of the 5 <sup>th</sup> wagon, in the running direction, derailed too.	i	22.06.2015
18	03.12.2014	In the branch of the railway county Craiova, <b>in the railway station Filiași</b> , one shock absorber of the rolling stock in motion hit the covers of the equipments DAM, from the switches no.7, no.11 and no.15.	i	30.06.2015
19	07.12.2014	In the branch of the railway county Iași, track section Adjud – Bacău (electrified double-track line), between the railway stations <b>Orbeni and Faraoani</b> , track II, Km. 279+200, a fire bursted in the cabin of the locomotive DHB 2001, being in the forming of the freight train no.80450, belonging to	i	Investigation in progress

		the railway undertaking S.C. Grup Feroviar Român SA, hauled by the locomotive EA 428.		
20	11.12.2014	In the branch of the railway county Galați, <b>between the railway station Filești and the plant railway station Cătușa</b> (wide gauge), km.2+500, in the running of the freight train no.76054, belonging to the railway undertaking SNTFM „CFR Marfă” SA, 5 CSI loaded wagons derailed.	i	Investigation in progress
21	17.12.2014	In the branch of the railway county Timișoara, track section Simeria – Hunedoara, non-interoperable track section managed by SC RC-CF TRANS SRL Brașov, electrified single-track line, <b>in the railway station Pestiș</b> , in the running of the freight train no.29920, belonging to the railway undertaking SC Cargo Trans Vagon SA, 4 wagons of the train derailed.	i	Investigation in progress
22	18.12.2014	In the branch of the railway county Cluj, <b>in the railway station Dej Triaj</b> , all axles of the first bogie from the locomotive EA 386, hauling the freight train no.50448, belonging to the railway undertaking SC UNICOM TRANZIT SA in the running direction, derailed.	i	25.06.2015
23	18.12.2014	In the branch of the railway county Timișoara, <b>in the railway station Lugoj</b> , the autostop equipment from the motorised train AM 952, running as passenger train no. 9615, belonging to the railway undertaking SNTFC „CFR Călători” SA hit and broke the autostop equipment of the route signal YPL 1.	i	27.01.2015
24	23.12.2014	In the branch of the railway county București, at the exit from <b>the railway station Ploiești Sud</b> , in the running of the freight train no.80386, belonging to the undertaking GRUP FERVIAR ROMÂN SA, all the axles of 3 wagons derailed.	i	Investigation in progress

(1) **The legal basis of the investigation:** i = In accordance with the Safety Directive, ii = According to 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) finished or ordered in 2014

#### Studies ordered and finished in 2014

Order date	Study name (type, location)	Legal basis for the investigation <sup>(1)</sup>	Additional data
17.06.2014	Report of laboratory mechanic tests, chemical analysis and metalographic checking no. 3011 – 038 from the 2 <sup>nd</sup> of October 2014 for the driving axle no. 43, charge 20991, type of steel 34 MoCN15x, broken from the motorised train AM 979, involved in the railway accident from the 7 <sup>th</sup> of May 2014, in the railway station Timisoara Nord.	ii	02.10.2014

(1) **The legal basis of the investigation:** i = In accordance with the Safety Directive, ii = According to 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 2014

Order date	Study name (type, location)	Legal basis for the investigation <sup>(1)</sup>	Additional data
-	-	-	-

(1) **The legal basis of the investigation:** i = In accordance with the Safety Directive, ii = According to 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 the investigations finished in 2014

During 2014, 40 investigations were finished, from which 12 have been opened in 2013, the rest of 28 being opened in 2014.

Forwards, we present a summary of those 40 investigation reports finished and closed in 2014.

3.4.1. The railway accident happened on the 2nd of February 2013, at 01:34 o'clock, in the branch of the railway county Timișoara, track section Simeria - Livezeni (electrified double-track line), in the railway station Pui, in the running of the freight train no.23817 (belonging to the railway undertaking SNTFM „CFR Marfă” SA), consisting in the derailment of the last 2 wagons (loaded with coal), because the circular fracture of the membrane from the wheel no.2 of the wagon no.815366558758 (wagon provided with cast wheels).

The investigation report was finished on the 21st of January 2014.

**The direct cause** was the circular fracture of the membrane from the cast wheel no.2 of the guiding axle from the first bogie of the wagon no.81536655875-8, left side of the running direction, because of a circumferentially crack appeared at the joining area between the membrane and the wheel boss, at about 300 mm from the edge of the wheel boss.

**Contributing factors:**

- unsuitable heat treatment;
- imperfect structure of the steel;
- mechanical characteristics inferior to those imposed by the regulations in force.

**Underlying causes:**

Non-compliance with the manufacturing technology in the development of the charge no.55743 IOB 1991, from which resulted the steel used in the construction of the cast wheel no.2 from the composition of the guiding axle of the first bogie from the wagon no.81536655875-8.

**Root causes:** none.

**Safety recommendations:**

Immediate identification of all SNTFM wagons provided with cast wheels made from the charge no. 55743 IOB 1991 and their withdrawal from traffic in order to perform the checking imposed by the regulation in force at the wheels fitted up for the founding of the possible cracks at their membrane, rim and boss and the application of the necessary provisions.

3.4.2. The railway accident happened on the 8th of May 2013, at 17:45 o'clock, in the branch of the railway county Cluj, between the railway stations Fiad and Telciu, in the running of the freight train no.43622, belonging to the railway undertaking SNTFM "CFR Marfă" SA, consisting in the derailment of 9 wagons loaded with logs (3 wagons turned over and other 6 derailed).

The investigation report was finished on the 07th of Aprilie 2014.

**Direct cause** was the overclimbing of the flange of the left wheel from the first axle of the second bogie, in the running direction, from the wagon no. 315354935878 on the rail head corresponding to the exterior track of the curve and leaving of the running track.

**Contributing factors**

- existence of an excess of cant at the line, because of the decrease of the running speed, during the time, from 60 km/h to 30 km/h;
- existence at the wagon no.315354935878 of some load ration values of the left wheel against the right one, of the same axle, respectively the wheel no.3 against the wheel no. 4 with a value of 1,20 and the wheel no.1 against the wheel no.2 with a value of 1,13;
- existence of a tilting of the wagon body to the interior of the curve, found at the measurement of the distances between the bogie frame and the upper slidebars;
- existence at the wagon no.315354935878 of an ineffective shock absorber, corresponding to the wheel no.4;
- reactions in train generated by the train positioning simultaneously on lines with different gradients and in curves of opposite directions and different radius, as well as by the existence of a ratio 2,1:1 between the locomotive weight from the rear of the train against the weights of the rtrain wagons.

**Underlying causes:**

Wrong understanding and application of the art.6 paragraphs (16) from the Regulations for hauling and braking no.006 concerning the remaining of the locomotives, that have been used as banking locomotives, in initial position, in the train composition, in cold condition.

**Root causes - none.**

**Measures that have been taken:**

In order to improve the railway safety, CREIR CF Cluj took measures to limit the traffic with cold locomotive at the rear of the train, on the track section Dealu Ștefăniței – Salva.

**Safety recommendations:**

Taking of necessary measures so that the operation staff understand exactly and unambiguously the application conditions of the provisions from the art.6 paragraph (16) from the Regulations for hauling and braking no.006, concerning the remainig in the initial position in the train composition, for continued running, as hauled vehicles and without be active in the train hauling, of the locomotives that have been used as banking ones.

- 3.4.3. The railway accident happened on the 2nd of September 2013, at 15.42 o'clock, in the branch of the railway county Cluj, between the railway stations Suplacu de Barcău and Șimleu Sivaniei, km.53+500, in the running of the freight train no.89435, belonging to the railway undertaking SC GRUP FERROVIAR ROMÂN SA, consisting in the derailment of the first bogie, in the running direction, from the wagon no.335379915549 (the 12th in the train composition –loaded with crude oil, without leakages).

The investigation report was finished on the 16th of January 2014.

**Direct cause** has been the track twisting over the accepted tolerances, it leading to the overclimbing of the wheel no.8 (right wheel in the train running direction, from the guiding axle of the first bogie from the wagon no.33537991554-9) on the rail corresponding to the exterior track of the curve, followed by its outside derailments.

**Contributing factors:**

- excess of cant;
- overlapping of the characteristics points “RC” determined by the end of the parabolic curve and the begining of the circular curve with the point “V” determined by the end of the up-grade of 4,5‰ and begining of the up-grade of 8,0‰ ( RC km 53+702, and V km 53+700);
- effect of the compression stress developed by the active banking locomotive.



**Underlying cause:** none.

**Root cause:** none.

**Safety recommendations:** none.

3.4.4. The railway accident happened on the 24th of September 2013, at 12:20 o'clock, in the running of the freight train no.76059, belonging to the railway undertaking SNTFM „CFR Marfă” SA, in the branch of the railway county Galați, in the railway station Cătușa, at the crossing over the interlocking switch no.6, consisting in the derailment of a bogie from the last wagon of the train.

The investigation report was finished on the 09th of January 2014.

**Direct cause** was the blocking, at the common crossing of the switch no.6R, of a drag shoe non-taken from the track before the train dispatching, it leading to the loose of the line guiding capacity and overclimbing of the shoe and leaving of the running track by the wheel no. 3 (left wheel of the first axle from the second bogie, running direction) of the wagon no.64508542 from the freight train no.76059.

**Contributing factors:**

- infringement of the provisions on the writing down, in the register of line clear, orders and movement, by the employees in charge with wagon shunting within the railway station, of the place condition of the shoe no.52.

**Undelying causes:**

- existence in „Regulations on the performance of shunting/transport on industrial branches” of the name of some functions with responsibilities in traffic safety on the routing of trains in traffic, uncorrelated with those existing in the instructions in force.

**Root causes** - none.

**Safety recommendations:**

1. Completion of „Regulations on the performance of shunting/transport on industrial branches” with provisions that establish in detail the responsibilities on traffic safety for the functions involved in the reception/dispatching of trains in traffic, including the correlation of the name of these functions with those from the instructions and specific regulations in force.
2. Updating or issuing of new instruction regulations for the establishment in detail of the responsibilities of the factors involved in the train traffic safety with dispatching from/or on another infrastructure as the public one.

3.4.5. The railway accident happened on the 27th of September 2013, at 22:00 o'clock, in the branch of the railway county Cluj, in the running of the freight train no.89441, belonging to the railway undertaking SC Grup Feroviar Român SA, at the passing on the line III of the railway station Reteag, consisting in the derailment of the first bogie of the second wagon from the locomotive, in the running direction.

The investigation report was finished on the 13th of January 2014.

**Direct cause** was the fracture of the rail from the inner track of the curve at the joint of km 17+100 (curve with left deviation in the running direction), followed by the dislocation of a rail of 170 mm, generated by the wheel no.1 of the first axle from the first bogie of the second wagon of the train.

It generated:

- fall of the wheel no.1 between the tracks;
- overclimbing of the corresponding wheel (wheel no.2) of the axle on the head of the right rail in the running direction (exterior track of curve), followed by the fall of the wheel no.2 outside the line;
- derailment of the axle with the wheels 1 - 2;
- the derailment of the second axle of the bogie (axle with the wheels 3 - 4).

**Contributing factors:**

- existence of a crack starting from the fish-bolt hole to the end of the rail. This crack grew up through the common crossing and the head of the rail.
- existence of some slag inclusions (that permitted the appearance of cracks and led to the rail fracture) in the fracture section from the central area of the rail head, where a dark spot has been observed.

**Underlying causes:**

Non-monitoring and non-checking of the failure category II, existing in the records of out of service rails from the District L Beclean - Secția L8 Bistrița, from km 17+100 (left rail in the running direction), infringing in this way the provisions of the next instructions:

- Instruction for the head maintenance district permanent way inspector no.323/1972, Art.9;
- Instruction for the activity of the gang foreman no.322/1972, Art.6, 7 și 14;
- Instruction for lengthmen and gangers or dangerous points no.321/1972, Art.22.

**Root causes** - none.

**Safety recommendations** - none.

- 3.4.6. The railway accident happened on the 04th of October 2013, at 15:40 o'clock, in the branch of the railway county Cluj, between the railway stations Suplacu de Barcău and Șimleu Silvaniei (non-interoperable track section managed by SC APRIA SRL), km.53+730, in the running of the freight train no.89401, belonging to the railway undertaking SC Grup Feroviar Român SA, consisting in the derailment of the 18-th wagon of the train  
The investigation report was finished on the 19th of February 2014.

**Direct cause** was the overclimbing of the flange of wheel no. 1 from the right side of the first axle of the first bogie in the running direction, from the wagon no.82537988021-4, the 18th wagon of the train, on the head of rail corresponding to the outside track of the curve and the axle derailment.

**Contributing factors:**

- existence of an inefficient shock absorber Lenoir, afferent to the first wheel no.1 from the first bogie, running direction, from the wagon no.82537988021-4, the 18th in the train composition;
- overlapping of the characteristics points "RC" at the km 53+702, determined on the long profile by end of up-grade of 4,5‰ and beginning of the up-grade of 8,0‰, curve with left deviation, (connection point on vertical plane-point V);
- reactions in train generated by the effect of the banking force generated by the active banking locomotive on a curved route, on an up-grade of 8,00 ‰.

**Underlying causes:**

- infringement of the art.6 point.3 from the Instruction of norms and tolerances for the track construction and maintenance – lines with standard gauge no.314/1989 approved by Order of the Deputy of the Minister of Transport and Telecommunications no.89 from the 10th of January 1989, that stipulates: "Put of the gradient connection in longitudinal section in the graduated transition curve is accepted only in cases well justified and with the approval of the Direction of Liners and Equipments".

**Root causes:** none.

**Measures that have been taken:**

Because on the track section Suplacu de Barcău – Șimleu Silvaniei two accidents happened in the running of the freight trains, hauled and banked and with banking locomotives, the manager of SC APRIA srl Cluj-Napoca, as manager of the non-interoperable track section, issued the DECISION no.2/18.12.2013 with the next content:

"On the track section Suplacu de Barcău – Șimleu Silvaniei - Suplacu de Barcău is forbidden the running of trains with banking locomotive".

**Safety recommendations:**

Identification of measures necessary to keep under control the derailment risk on the track section Suplacu de Barcău – Șimleu Silvaniei by the decrease of the effects of the factors that contributed at the railway accident.

- 3.4.7. The railway accident happened on the 16th of October 2013, at 08:40 o'clock, in the branch of the railway county Cluj, between the railway stations Monor Gledin and Râpa de Jos, km.33+300, by overtaking and hit of the last wagon of the freight train no.50473-2 (belonging to the railway undertaking SC Unicom Tranzit SA) by the train no.48924 (tower wagon DP 58 belonging to District LC Sărățel), running between Sărățel - Râpa de Jos. It was followed by the derailment of the second axle of the tower wagon, in the running direction, and the injury of 16 persons from the cabin of the tower wagon. The investigation report was finished on the 3rd of March 2014.

**Direct cause** was the non-stopping of the tower wagon DP 58 that ran on the path of the freight train no.48924, at the signal Section Block 6 from the automatic block system Monor Gledin – Râpa de Jos that, being closed, ordered stop, leading to the overtaking and hit of the last wagon of the freight train no.50473-2, derailment of the second axle of the tower wagon, in the running direction and the injury of 16 persons from the tower wagon.

**Contributing factors:**

- lot of vegetation existent in the light passing signal area of the automatic block system BL 6, that impeded its visibility;
- the technical condition of the light signal BL6 that had the bulb out of service also at the additional red light
- the increased fatigue of the tower wagon driver, generated by his work ( he had to have to availability to be called at the working place), he had not ensured the rest time stipulated either by the Regulations de consemn or that stipulated between two successive presences at work place;
- non-ensurance at District LC+EA ELF Sărățel of the optimum number of jobs for the function of tower wagon driver, it leading to the impossibility to ensure the necessary authorized staff for the service continuity, even if through the programmed situation

**- Underlying causes:**

Infringement of the provisions of art.89 paragraphs (1) and (2) from the Signalling regulations no.004/2006 concerning the obligations of the driver when he meets a light passing signal of the automatic block system closed.

**Root causes:**

- mismatch between the provisions of art.13 paragraph (1) from the Instruction 340/2001 (upon it the routing and running UAM is made upon line clear) and art.208, paragraph (3) from the Regulations 005/2005 (upon it UAM can be dispatched after a train – with automatic electrical resistance – at the block system).
- lack of provisions on the competences and the way to authorize the attendant agent of the tower of wagon.
- lack of provisions in the Regulations *for the work availability anytime* on the ensurance of authorized staff for the driving of the tower wagons after the interventions that interrupt the rest time.

**Safety recommendations:**

- supplement of the regulation framework with provisions for the way to train, examine and authorize the attendant agent of the tower wagon.
- supplement of the Regulations *for the work availability anytime* with provisions for the ensurance of the authorized staff for the driving of the tower wagons after interventions that interrupt the rest time.
- correlation of the provisions from the Instructiona 340/2003 and of those from the Regulations no.005/2005 for routing and running of UAM.

3.4.8. The railway accident happened on the 20th of November 2013, at 09:30 o'clock, in the running of the freight train no.31710, belonging to the railway undertaking SNTFM "CFR Marfă" SA, in the branch of the railway county Craiova, between the railway stations Valea Albă and Balota, km 347+200, consisting in the derailment of one bogie of the 8th wagon, from the locomotive.

The investigation report was finished on the 31st of January 2014.

**Direct cause** of the derailment of the wagon no.31539335121-0 was the overclimbing of the flange of wheel no.7 on the running surface of the rail corresponding to the exterior track of the curve, because of the twisting of the track over the the accepted maximum value, under the action of the dynamic stresses generated by tyhe rolling stock, followed by its fall outside the track and of the correspondent wheel no.8 between the tracks.

**Contributing factors:**

- infringement of the instruction provisions on the measures that have to be taken at the end of the works for the renewal of the track necessary to resume the railway traffic, it leading to the appearance of some distortions of the track, with values over the accepted tolerances;
- lack of the check rail between the tracks close to the rail corresponding to the inner track of the curve;
- non-compliance with the condition that the diferences between the measured values of the deflections next to the curve be according to the accepted tolerances;
- infringement of the provisions from the technical specification „Protection of the track bed km 347+100-km 347+250 between the railway stations Balota - Valea Albă line 100 Videle - Orșova P.TH.+ D.E. SUPRASTRUCTURĂ LINII C.F.”, concerning the damage of the peg network, stamped within the complementary marking, connected in horizontal plan and long profile with the same pags as the initial ones;

**Underlying causes** - none.

**Root causes** - none.

**Safety recommendations** - none.

3.4.9. The railway accident happened on the 2nd of December 2013, at 01:30 o'clock, in the branch of the railway county Craiova, between the railway stations Zlătărei and Drăgășani, at km 234+800, in the running of the freight train no.22002-1 (belonging to the railway undertaking SNTFM "CFR Marfă" SA), consisting in bursting of a fire in the hauling locomotive DA 875 of the freight train.

The investigation report was finished on the 24th of February 2014.

**Direct cause:** The fire appeared because a crack in the flexible connection from the gas-oil installation, that makes the connection between the three way cook and the coarse filter, in the area of the upper reinforcement close to the three way cook, leading to the diesel spraying and its ignition from the sparks generated by the collector of the electric engine that drives the fuel pump and the auxiliary oil pump of diesel engine).

**Contributing factors:** none.

**Underlying causes:**

One did not meet with the repair cycle for the locomotive, according to the provisions of the Railway norm "Railway vehicles. Types of planned inspections and repairs. Norms of times or norms of km run for the performance of planned inspections and repairs", approved by Order of Minister of Transports and Infrastructure no.315/2011, amended by Order of Minister of Transports and Infrastructure no.1359/2012.

**Root causes:** none.

**Safety recommendations:** none.

3.4.10 Railway accident happened on the 4th of December 2013, at 07:30 o'clock, in the branch of the railway county Braşov, between the railway stations Praid and Sovata (non-interoperable line managed by SC RC-CT Trans SRL), at the level crossing from km 109+410 provided with road sign and mechanical barriers, consisting in the collision between the motorised train no. 4503, running as passenger train no. 14630 (belonging to the railway undertaking SC REGIOTRANS SRL), and the car no. AG-87-BCE, that led to the derailment of one axle of the motorised train trailer, injury of the car driver, damage of the car.

The investigation report was finished on the 30th of June 2014.

**Direct cause** was the non-meeting by the car driver with the road signs indications, concerning the high caution of the road drivers close to the level crossings, corroborated with the non-compliance with the train priority at the level crossing.

**Contributing factors:**

- the car driver did not assure himself before to cross the line at the level crossing and did not stop in front of it, taking into account that the road signs warned him that he is close to a very dangerous place where he should assure himself before to cross the line at the level crossing, even if the information on the level crossing were ambiguous.

**Underlying causes:** none.

**Root causes:** none.

**Measures that were taken:**

Following the non-conformities found out at the level crossing signalling, Romanian Railway Investigating Body submitted the report draft to road administrator, National Companies of Highroads and National Roads in Romania (CNADNR), as well as to the Direction of Road Police within the General Inspectorate of Romanian Police, asking for a meeting for the analysis of non-conformities on the level crossing signalling.

Following this meeting:

- Road Service within District Police Inspectorate Harghita, after reading the investigation report draft, it notified the public road administrator, Regional Direction of Roads and Bridges Braşov – Section of National Roads Miercurea Ciuc to remove the non-conformities found out on their signalling;
- the representative of the road administrator mentioned that, following the analysis of the investigation report draft and of the action of Road Service within District Police Inspectorate Harghita, one took all measures for signalling the level crossing on the roads of the Regional Direction of Roads and Bridges Braşov, within CNADNR.

**Safety recommendations:**

Through the recommendations issued, the investigation commission has in mind to determine the railway infrastructure managers/administrators to perform their checks of the level crossing, operated in similar conditions as that from km 109+400, between Praid and Sovata and of the regulation framework on the crossing way of the level crossing by trains and to dispose, if case, the measures for keeping under control the risk of accidents.

The safety recommendations in this investigation are:

1. Harmonization of the Regulations for the operation of the track section Târnăveni-Praid (worked out by CNCF „CFR” SA) and of the Regulations on the functioning of the barriers of the level crossing from the track sections Blaj-Praid, Vânători-Odorhei, Alba Iulia-Zlatna (worked out by the manager of non-interoperable infrastructure SC RC-CF TRANS SRL Braşov) through corroboration with the provisions of the Regulations for the train running and railway vehicle shunting - no.005/2005 (approved by Order of Minister of Transports, Constructions and Tourism no.1816/26.10.2005) with those from standard SR 1244-3/1990, standard SR 1244-2/2004 and standard SR 1244-1/1996, on the classification of the level crossing from km 109+400 between the railway stations Praid and Sovata and its railway and road signalling;



2. Supplement of the regulation framework with detailed provisions on the way to cross a level crossing of current line, for which there is not ensured by the visibility area (diamond) and no barriers, by the trains, also the cases where the signalling systems of the level crossing are out of service or damaged, so that the risk of accident be kept under control.
3. Organization by the administrators/managers of the interoperable/non-interoperable public railway infrastructure of some joint actions with the administrators of roads and with the Road Direction within General Romanian Police Inspectorate in order to check all the level crossing that work in conditions similar to that from 109+400 between the railway stations Praid and Sovata and if case, taking of necessary measures, in order to keep under control the risk of accidents.

The safety recommendations are for the public institutions and economic operators directly involved in the maintenance of the level crossing from the km 109+400 between the railway stations Praid and Sovata and in checking of the conditions for its operation, respectively to:

- Romanian Railway Safety Authority;
- administrator of the non-interoperable railway infrastructure SC RC-CF TRANS SRL Braşov;
- railway passenger undertaking SC REGIOTRANS SRL Braşov;
- National Company of Highroads and National Roads in Romania – administrator of national road DN 13A – Section of National Roads Miercurea Ciuc within the Regional Direction of Roads and Bridges Braşov;
- Road Direction within the General Inspectorate of Romanian Police;
- others administrators/managers of non-interoperable public railway infrastructure, that operate level crossing similar to that, object of this investigation.

- 3.4.11. Railway accident happened on the 9th of December 2013, at 21:39 o'clock, in the branch of the railway county Craiova, between the railway stations Valea Albă and Balota, km 347+230, in the running of the freight train no.30650, belonging to the railway freight undertaking DB SCHENKER RAIL ROMÂNIA SRL, consisting in the derailment of 2 wagons, that is the derailment of both axles of the 5th wagon from the rear of the train and the second axle of the 6th wagon, in the running direction.

The investigation report was finished on the 5th of March 2014.

**Direct cause** of the wagon no.25804367935-0 derailment was the overclimbing of the flange of wheel no.1 on the running surface of the rail corresponding to the exterior track of the curve, followed by its fall outside the line and of the correspondent wheel no.2 between the tracks, at the running on a track section with the value of the track twisting over the accepted value.

**Contributing factors:**

- one did not perform all the checks of the track geometry, after the end of the works, in order to resume the railway traffic;
- unsuitable compacting of the broken stone bed, it leading to the appearance of distortions of track with values over the accepted tolerances;
- fall out of the accepted tolerances of the difference values between the rolling circle diameters of the wheels of the wagon no.25804367935-0;
- performance of the works for the protection of the track bed on a length double against the provisions from the technical specification, without assigning a suitable time period;
- one did not fit up the check rail between the tracks, close to the rail corresponding to the inner track of the curve;
- infringement of the provisions from the technical specification „Protection of the track bed km 347+100-km 347+250 between the railway stations Balota - Valea Albă line CF

100 Videle - Orșova P.TH. + D.E. SUPRASTRUCTURĂ LINII C.F.”, concerning damage of the peg network, stamped within the complementary marking, connected in horizontal plan and long profile with the same pags as the initial ones.

**Underlying causes:**

- infringement of the provisions of the technical specifications on the way to perform the works;
- infringement of the provisions of the Instruction of norms and tolerances for track construction and maintenance – track with standard gauge no.314/1989 approved through Order of the Deputy of Minister of Transports and Telecommunications no.89 from 10.01.1989, on tolerances referitoare la toleranțele la nivel and plan laying of the track.

**Root cause** - none.

**Safety recommendations** - none.

3.4.12.The accident happened on the 21st of December 2013, at 19:05 o'clock, in the branch of the railway county Brașov, between the railway stations Mureni and Vânători, track I, km.282+600, in the running of the freight train no.32603, belonging to the railway freight undertaking SNTFM "CFR Marfă" SA, consisting in the derailment of the firts axle of the hauling locomotive EA 745,running direction.

The investigation report was finished on the 19th of March 2014.

**Direct cause** was the overclimbing of the flange of right wheel from the axle no.6 on the running surface of the rail corresponding to the exterior track of the curve, because the track twisting over the accepted maximum value, under the dynamic stresses generated by the rolling stock, followed by its fall outside the track and the fall of the corresponding left wheel from the same axle between the tracks.

**Contributing factors:** none.

**Underlying causes:**

Infringement of the provisions of art.6.7 from *Instruction for the use of the testing and recording car no.329/1995* on the removal of the failures level 5.

**Root causes:** none.

**Safety recommendations:** none.

3.4.13.Railway accident happened on the 9th of January 2014, at 00:50 o'clock, in the branch of the railway county Brașov, between the railway stations Brașov Triaj and Dârste, km.169+100, in the running of the freight train no.51740, belonging to the railway undertaking SNTFM "CFR Marfă" SA, consisting in the derailment of the first axle from the 9th wagon, in the running direction.

The investigation report was finished on the 28th of March 2014.

**Direct cause** was the punctual increase of the gauge during the running of the rolling stock in a curve area, it leading to the fall of the left wheel from the first axle, in the running direction of the wagon no.215315023071, between the tracks, followed by the overclimbing of the flange of right wheel from the same axle on the running surface of the head of rail corresponding to the exterior track of the curve and its fall outside the line.

**Contributing factors:**

- lack of the corresponding number of the coach screws for the fastening of the metallic plates on the wooden sleepers, as well as the existence of some broken coach screws;
- stone track bed choked with ground and vegetation about 80-90 %, the fastening elements being covered (they were not visible) both inside and outside the curve.

**Underlying causes:**

Unsuitable maintenance of the track superstructure within the curve km 168+756-169+114.

**Root causes:** none.

**Safety recommendations:** none.

3.4.14. The railway incident happened on the 18th of January 2014, at 08:05 o'clock, in the branch of the railway county Timișoara, in the railway station Aradu Nou, km 51+570, in the running of the train L 27501, where the driver put in motion the cold locomotive ED 016-9 (belonging to Depot Craiova), without having this right, passing the exit signal X5 on stop position and trailing the switches 14-12, entering on the route of the train 78-1, followed by the derailment of those 3 axles of the bogie 2 in the running direction.. The investigation report was finished on the 31st of March 2014.

**Direct cause** was the put in motion of the cold locomotive ED 016-9 (train L 27501) stopped on the line no.5, voluntary by the driver, followed by the lack of measures for braking, taken on time, in front of the light exit signal X5 on red position, „STOP, *without passing the signal on stop position!*”.

**Contributing factors:** none.

**Underlying causes:**

Non-keeping watch over the position of the fixed and mobile signals and indicators, against the provisions of art.127 paragraph (1) letter a), from the Instructions for the activity of the locomotive staff no.201/2007.

**Root causes:** none.

**Safety recommendations:** none.

3.4.15. Railway accident happened on the 27th of January 2014, at 21:00 o'clock, in the running of the passenger train no.14269, consisting in 3 motorised trains RIO-004 and the locomotive BB-523 at the rear of the train, belonging to the railway undertaking SC REGIOTRANS SRL, in the branch of the railway county Timișoara, in the railway station Hunedoara, consisting in the derailment over the double slip TDJ 49/51, km 15+350, of the last bogie from the 3rd wagon no.57-3353-0 (in the running direction) and the first bogie of the locomotive BB-523 (in the running direction). The investigation report was finished on the 7th of March 2014.

**Direct cause** was the fall of the left wheel from the first axle of the first bogie of the locomotive between the tracks, followed by the overclimbing of the flange of the right wheel on the running surface of the rail corresponding to the exterior track of the curve and its fall outside the track, running on a track section with gauge values over the maximum limit accepted in operation.

**Contributing factors:**

- keeping in the line of sleepers that do not ensure the rail fastening, keeping of the gauge and of the level between the accepted tolerances and that can not be repaired.

**Underlying causes:**

Infringement of the provisions art.25 of the *Instructions of norms and tolerances for the track construction and maintenance – lines with standard gauge no.314/1989*, that regulates the replacement of unsuitable sleepers

**Root causes:** none.

**Safety recommendations:** none.

3.4.16. Railway accident happened on the 1st of February 2014, at 05:05 o'clock, in the running of the freight train no.30638-1, belonging to the railway undertaking DB SCHENKER RAIL ROMÂNIA SRL, in the branch of the railway county București, in the railway station Ploiești Sud, after the entrance of the train on the line 7, consisting in the derailment of the first axle, in the running direction, of the locomotive 91 53 0 471 003-0. The investigation report was finished on the 25th of February 2014.

**Direct cause** was the broken and detachment of a part of 250 mm length from the rail of the exterior track of the curve at the joint from the km 59+450 (curved with left deviation

in the running direction), under the dynamic action of the axle no. 1 of the locomotive EA 91-53-0-471-003-0.

**Contributing factors:**

- cut and holing of the rail with oxyacetylene flame;
- flakes, gas bubbles, metallic inclusions in the steel used in the head of rail, around them appeared cracks, that, under the dynamic action of the rolling stock, led to the rail fracture;

**Underlying causes:**

Keeping in the line of the out of order rail of category (rail cut and holed with flame), infringing in such way the provisions of art.21 from the Instructions of norms and tolerances for the track construction and maintenance – lines with standard gauge no.314/1989.

**Root causes:** none.

**Safety recommendations:** none.

- 3.4.17. Railway incident happened on the 2nd of February 2014, at 23:40 o'clock, in the branch of the railway county Galați, in the railway station C.A. Rosetti, in the running of the freight train no.20936, belonging to the railway undertaking CARGO TRANS VAGON SA, where an open door of the 7th wagon from the locomotive hit 4 contact wire pillars. The investigation report was finished on the 19th of February 2014.

**Direct cause** was the opening along the route of the second pair of lateral double wheels, on the right side in the running direction (driver side), from the wagon no.33535320002-5, the 10th from the locomotive of the freight train no.20936.

**Contributing factors:** none.

**Underlying causes:** none.

**Root causes:** none.

**Safety recommendations:** none.

- 3.4.18 Railway accident happened on the 3rd of February 2014, at 17:35 o'clock, in the running of the freight train no.89543, belonging to the railway undertaking SC Grup Feroviar Român SA, in the branch of the railway county Galați, in the railway station Barboși Triaj, at the entrance of the train on the line 0D, consisting in the derailment of one bogie at each of the wagons 31 and 35 of the train. The investigation report was finished on the 24th of March 2014.

**Direct cause** was the overclimbing of the flange of the right wheels in the running direction from the derailed wagons on the running surface, because of some ice accretion on the left rail, cumulated with the thick level of snow between the tracks pressed by the running gears of the railway vehicles.

**Contributing factors:**

- serious winter weather conditions

**Underlying causes:** none.

**Root:** none.

**Measures that were taken:**

- soon after the railway accident occurrence, the public infrastructure manager asked for the removal of ice and snow, generated by the serious weather conditions.

**Safety recommendations:** none.

- 3.4.19. Railway incident happened on the 6th of February 2014, at 20:32 o'clock, in the branch of the railway county Constanța, in the railway station CF Palas, in the running of the freight train no.L87967, belonging to the railway undertaking SNTFM "CFR Marfă" SA, consisting in the wrong performance of the exit route of the train from the railway station, followed by the trailing of the switch no.22.

The investigation report was finished on the 19th of February 2014.

**Direct cause** was the wrong performance of the exit route for the freight train no. 87967.

**Contributing factors:**

- lack of checking of the exit route before dispatching the freight train no.87967;

**Underlying causes:** none.

**Root causes:** none.

**Safety recommendations:** none.

- 3.4.20 Railway incident happened on the 15th of February 2014, at 6:12 o'clock, in the branch of the railway county Iași, between the railway stations Târgu Frumos and Ruginoasa, Km 18+500, in the running of the passenger train R 5601, belonging to the railway undertaking SNTFC „CFR Călători” SA, where the hauling locomotive EA 929 hit the inductor of 1000/2000Hz afferent to the signal BI 113.

The investigation report was finished on the 7th of March 2014.

**Direct cause** was the exceeding of the locomotive loading gauge by the cover of the inductor from the cabin II of the locomotive, it leading to the hit of the inductor of 1000/2000 Hz afferent to the light passing signal block system BL 113.

**Contributing factors:**

- the locomotive met in the free clearance an animal, after the train leaving from the railway station Costești Iași.

**Underlying causes:** none.

**Root causes:** none.

**Safety recommendations:** none.

- 3.4.21 Railway incident happened on the 17th of February 2014, at 8:05 o'clock, in the branch of the railway county Brașov, between the railway stations Valea Lungă and Micăsasa, km 361+500, track II, in the running of the freight train no.50472, belonging to the railway undertaking SC UNICOM TRANZIT SA, consisting in the hit of a bulldozer of the company SC ARCADA SA, that performed works on the track I, within the modernization of the pan-European IV corridor.

The investigation report was finished on the 20th of March 2014.

**Direct cause** was the entry in the free clearance of a vehicle that performed specific works in the track area.

**Contributing factors:** none.

**Underlying causes:** none.

**Root causes:** none.

**Safety recommendations:** none.

- 3.4.22 Railway incident happened on the 20th of February 2014, at 20:18 o'clock, in the branch of the railway county Craiova, in the railway station Vlădueni, line II, in the running of the freight train no.50490-1, belonging to the undertaking SC UNICOM TRANZIT SA, consisting in the passing of the shunting limit signal on stop position and the exit semaphore signal no. 2 on „stop”.

The investigation report was finished on the 31st of March 2014.

**Direct cause** was the non stopping of the freight train no.50490-1, following the lack of perception and watching carefully of the position of the exit semaphore signal no.2 that was on stop position with the horizontal arm to right side of the running direction, on the position „STOP without passing the signal on stop position!”.

**Contributing factors:** none.

**Underlying cause:**

- infringement of the provisions of art.127(1), lit.a, din Instructions on the activity of the



locomotive staff no.201/2007, that stipulates the compulsoriness of the locomotive staff to watch carefully during the route the position the fixed and mobile signals and the indicators put according to the specific regulations in force.

**Root causes:** none.

**Safety recommendations:** none.

3.4.23 Railway accident happened on the 10th of March 2014, at 12:15 o'clock, in the running of the work train no.88395, consisting in the gang cars DCL 033 and DCL 007, belonging to CNCF „CFR” SA, in the branch of the railway county Constanța, between the railway stations Palas and Constanța Mărfuri (non-interoperable track section managed by SC GFR SA), km 1+200, consisting in the derailment of the first axle of the gang car DCL 033, in the running direction.

The investigation report was finished on the 29th of August 2014.

**Direct cause** was the running of the gang car with a speed, appreciated by the driver intuitively, the gang car having the speed record out of order, on a line with failures of the infrastructure level that allowed the running with speed restriction 30 km/h, it leading to:

- overloaded of the left wheel, in the running direction, from the first axle of the gang car;
- load transfer of the right wheel (first wheel) km.1+200, track section Palas - Constanța Mărfuri;
- overclimbing of the right rail, running direction, by the first wheel;
- derailment of the driving axle of the gang car, with the first wheel on the right side, running direction, and the correspondent wheel between the tracks.

The derailment dynamics was negatively influenced also by the unequal load distribution of the loads on wheels, generated by the existence of a difference of 7 mm between the limit values (maximum and minimum) of quota measured in those 4 points of the primary suspension of the gang car, the accepted limit being 6 mm.

**Contributing factors:** none.

**Underlying causes:**

- unsuitable performance of the works for the axle replacement, by the lack of counterbalancing of the secondary suspension and the lack of weighing of the gang car after the axle replacement, by a society that did get neither technical agreement in this respect nor necessary technical documentation.

**Root causes:**

Lack of a railway norm for the gang cars on:

- types of planned inspections and repairs;
- time norms for the performance of planned inspections and repairs ;
- works that have to be performed within the planned inspections and repairs.

**Safety recommendations:**

Working out of the normative framework for the operation, traffic and maintenance of the gang cars type DCL, on the keeping under control of the determinant elements of the traffic safety.

3.4.24 Railway incident happened on the 27th of March 2014, at 21:15 o'clock, in the branch of the railway county Timișoara, track section Simeria - Subcetate (electrified double track line), in the railway station Bretea Streiului, direct line III closed for maintenance, where the ballast screener MCB 057, coupled with the technologic wagon no.40539530064-4 and hydraulic machine for rail lifting (belonging to SC „ÎNȚREȚINERE MECANIZATĂ A CĂII FERATE” SA - SIMC Timișoara), started to run, passed the shunting limit signal on stop position and entered on the track I to the railway station Călan Băi.

The investigation report was finished on the 28th of May 2014.

**Direct cause** was the lack of insurance against the runaway of the technological train set, consisting in the ballast screener MCB 057, technologic wagon on two axles

no.40539530064-4 and hydraulic machine for rail lifting, from the railway station Bretea Streiului, according to the instruction provisions.

**Contributing factors:**

- lack of analysis of „Technical provisions on the working way in the RPe on the direct line 3 Bretea Strei km 21+975 – 23+14”, in the railway station Bretea Streiului.

**Underlying causes:**

- infringement of the provisions „Technical provisions on the working way in the periodical repair work on the direct line 3 Bretea Strei km 21+975 – 23+14”, on the stabling of the technological train set after the work finished in the railway station CF Bretea Streiului, on another line than that established , respectively direct line 3 instead line 1;
- infringement of the provisions of the Sheet 25 from the Operation Technical Plan - PTE of the railway station Bretea Streiului on the blocking of the rolling stock on the lines of the railway station and wrong writing down at the giving/reception of the activity between the movements inspectors in the Register of Unified Free Tracks, Orders and Movement, without checking on spot, in order to ensure the wagons of the train set.

**Root cause:** none.

**Measures that were taken:**

- soon after the technological train set runaway, the movements staff took all the measures for its safety guiding on the line 6 and then on the shunting neck from the railway station Călan Băi where it was stopped with drag shoes put on those two tracks, followed by the derailment of the hydraulic machine and of the technological wagon.

Through the taken measures one avoided some serious consequences with death and important material damages.

**Safety recommendations:** none.

3.4.25 Railway accident happened on the 31st of March 2014, at 00:18 – 00:48 o'clock, in the branch of the railway county Iași, in the railway stations Dolhasca km.407+600, Lespezi km.396+300 și Pașcani km.387+00-385+800, in the running of the freight train no.94688, belonging to the railway undertaking SNTFM "CFR MARFĂ" SA, consisting in the hit of the pegs and of the equipments afferent to the track sections SI 4-8 (Dolhasca), LII (Lespezi), SI 026, 4C, 28-30, 2C, 4C-7C (Pașcani) by the lateral plank of the wagon no.21533316116-8, the 13th from the locomotive.

The investigation report was finished on the 22nd of Aprilie 2014.

**Direct cause** was the fall of the first left plank, in the running direction of the 13th wagon from the locomotive, because the lack of the draw-hook pin from the first articulation, it leading to its entrance into the free clearance, followed by the hit of the pegs and equipments afferent to the insulated track sections.

**Contributing factors:** none.

**Underlying causes:**

- non-ensurance against the fall of the plank during the technical inspection performend when the freight train no.94688 was formed, on the 30/31.03.2014, in the railway station Suceava.

**Root causes:** none.

**Safety recommendations:** none.

3.4.26. Railway incident happened on the 8th of April 2014, at 09:10 o'clock, in the branch of the railway county Timișoara, in the railway station Timișoara Nord, in the running of the passenger train no.9613-2, belonging to the railway undertaking SNTFC "CFR Calatori" SA, consisting in the entrance on the entry route in the railway station on the closed double-track line Timișoara Sud and trailing of the switch no.4 with access to the part of the closed line.

The investigation report was finished on the 30th of Aprilie 2014.

**Direct cause** was the wrong making of the entry route and reception of the regio passenger train no.9613-2 in the railway station Timișoara Nord, on the line 124, closed one, between the switch no.8 și and the route signal YPF.

**Contributing factors:**

- poor communication between the disposing station movements inspector end Y of the railway station CF Timișoara Nord and the person in charge with traffic safety on tracks, regarding the existence of track team at the work place and signalling of the working area with red discs.

**Underlying causes:**

- failure of the disposing station movements inspector end Y of the railway station Timișoara Nord to put in evidence in CE equipment, the closed line, against the art.12 from the Instruction for the operation of CE equipment in the railway station Timișoara Nord, Instruction 317/2004 art.110 letter (b) and Regulations no.005/2005 art.325 letter(b).

**Root causes:** none.

**Safety recommendations:** none.

3.4.27 Railway incident happened on the 13th of April 2014, at 00:01 o'clock, in the branch of the railway county Brașov, track section Brașov – Ploiești Vest (electrified double-track line) between the railway stations Predeal și Timișul de Sus, on the track I, in the running of the freight train no.50406-1 (belonging to the railway undertaking SC Unicom Tranzit SA București), consisting in the exceeding of the maximum accepted speed.

The investigation report was finished on the 3rd of December 2014.

**Direct cause** was the unsuitable functioning of the automatic brake of the train wagons, leading to the failure of the braking effect necessary to keep the maximum accepted speed at the moving down on the slope.

**Contributing factors:**

- exceeding of the maximum accepted tonnage stipulated in the timetable with the freight train traffic for the track section Predeal-Brașov, because of the wrong writing down, in the consignment note, of the transported goods weight.

**Underlying causes:**

- the works performed within the last planned repair (RP) at a part of the wagons of the freight train no.50406-1, did not assure the working of the automatic brakes at the level of traffic safety imposed by the specific regulations in force.

**Root causes:** none.

**Measures that were taken:**

During the investigation, one took measures to increase the safety running of the trains on bigger slopes, applying, starting with the 30th of October 2014, the Order of the Minister of Transports no.1466, that stipulates at the art.III, point 2 that *„The routing of the freight trains on slopes with gradients over de 21‰ or track sections with big slopes stipulated in the annex no. 12 at the Regulations for hauling and braking no. 006/2005, approved by Order of the Minister of Transports, Constructions and Tourism no.1.815/2005, with further amendments, irrespective of their gradient, is made only after performing a train braking test, respectively full brake tests. The full brake test shall be made in a railway station preceding the railway station slope top, that shall be established in the timetable with the freight train running.”.*

**Safety recommendatiuons:**

- introduction, into the timetable with the freight train running, of the percentages of minimum braked weight for the freight trains, that include wagons provided with brake proportional to the load and that run on the track sections with big slopes.
- regulation of the communication way, used by the railway undertaking in relation to the railway public infrastructure administrator C.N.C.F. „CFR” S.A, to send information concerning the existence in the train forming of wagons with brake proportional to the load or the existence and functioning of the electric brake at the hauling locomotives of

the train.

3.4.28. The railway incident happened on the 14th of April 2014, at 10:35 o'clock, in the branch of the railway county Braşov, track section Sighişoara-Copşa Mică (electrified double-track line), on the track II, between the railway stations Aţel and Mediaş, where the locomotive EA 236 (belonging to the Engine Shed Braşov) hauling the regio passenger train no.3501, (belonging to the railway undertaking SNTFC "CFR Calatori" SA), hit a track machine, that performed works on the pan-European IV corridor and that was in the free clearance.

The investigation report was finished on the 8th of May 2014.

**Direct cause** was the entrance into the free clearance of a track machine (track excavator) performing specific works.

**Contributing factors:** none.

**Underlying causes:**

- infringement of the provisions from „Instructions for the track No.303/2003”, Art.115 (2), on the establishment, for each work responsible, the tasks both for the work performance and staff and machines protection.

**Root causes:** none

**Safety recommendations:** none.

3.4.29 Railway accident happened on the 8th of May 2014, at 00:50 o'clock, in the running of the freight train no.93849, belonging to the railway undertaking SNTFM "CFR MARFĂ" SA, in the branch of the railway county Craiova, between the railway stations Işalniţa and Coţofeni, km 264+000, consisting in the derailment of the first bogie of the 9th wagon, in the running direction.

The investigation report was finished on the 29th of September 2014.

**Direct cause** was the partial unloading of the goods from the derailed wagon (goods from the compartment opposite the first wheel no. 7 were not unloaded).

It led to the overloading of the wheel no.8 and corresponding load transfer of the first wheel no.7, belonging to the first axle of the first bogie from the wagon no.81536651298-7, the 9th from the locomotive of the freight train no.93849, generating the derailment of the driving axle of the left bogie, in the running direction, on the switch no.14 end Y of the railway station Cernele, km 256+500.

**Contributing factors:** none.

**Underlying causes:** none.

**Root causes:**

- convention for unloading no. C.S.1.1/343/09.10.2013, the reception of the wagons unloaded in the railway station Cernele does not explicitly stipulate the inspection of the wagons concerning their unloading by the beneficiary.

**Safety recommendations:**

- identification of measures for the keeping under control of the risk afferent to the partial unloading of the wagons by the beneficiaries.

3.4.30 Railway incident happened on the 2nd of June 2014, at 03:27 o'clock, in the branch of the railway county Craiova, between the railway stations Roşiori Est and Roşiori Nord, in the running of the freight train no.9358, belonging to the railway undertaking SNTFC "CFR Călători" SA, the motorised train AM 764 passed the signal Yu on stop position, following the change of its position from yellow to red.

The investigation report was finished on the 4th of July 2014.

**Direct cause** was the change of the signal Yu position from yellow to red, at the passing of the train in front of it.

**Contributing factors:** none.

**Underlying causes:** none.

**Root causes:** none.

**Safety recommendations:**

- identification of the signals of entrance on the block system that perform also the caution function of the entry signal and put in connection, if case, of the signalling with the pegs stipulated by the Regulations for signalling no.004 and the Regulations for railway technical operation no.002.

3.4.31. Railway incident happened on the 26th of June 2014, at 14:00 o'clock, in the branch of the railway county Cluj, in the running of the freight train no.48364, composed from the track machine MP 135-004, between the railway stations Beclean pe Someş and Bistriţa Nord, consisting in the hit of the inductors of 1000/2000 Hz and of 500 Hz on the right side of the running direction Beclean pe Someş - Bistriţa Nord.

The investigation report was finished on the 15th of July 2014.

**Direct cause** was the exceeding of the maximum loading gauge by the wear plate of the back front plough, right side running direction and its entrance into the free clearance.

**Contributing factors:**

- use for the fastening of the wear plate of a plate washer instead of a device for blocking the grooves;
- the nut of the screw for the adjustment of the wear plate of the front plough back, right side, loosened because the bumps.

**Underlying causes:** none.

**Root causes:** none.

**Measures that were taken:**

The wear plate was accordingly ensured, with a device for the groove blocking.

**Safety recommendations:** none.

3.4.32 Railway incident happened on the 12th of August 2014, at 12:30 o'clock, in the branch of the railway county Constanţa, in the railway station Feteşti, where the freight train no.21737 (belonging to the undertaking SNTFM „CFR Marfă” SA) was found with a non-ensured percentage of braked weight, following the non-instruction position of the condition changeover empty/loaded at 8 wagons of the train routed from the railway station Pogoanele.

Investigation report was finished on the 30th of September 2014.

**Direct cause** was the non-achievement of the minimum percentage of braked weight accepted for the freight nro. 21737, from the 12th of August 2014, condition changeovers „Empty/Loaded” at 5 wagons from the total of 32 wagons being on unsuitable position.

Because the unsuitable position of the condition changeovers „Empty/Loaded” of those 5 wagons being on „Empty” (the wagons being loaded), the real braked weight of the train being decreased with 80 tons, so the percentage of braked weight corresponding to the automatic braking be achieved about 46,7% against 50% minimum stipulated in the train timetable.

**Contributing factors:** none.

**Underlying causes:**

- put of the condition changeover from 5 loaded wagons, with automatic brake in service, on „Empty” instead „Loaded”, against the provisions of the Regulations for the train running and railway vehicle shunting no.005, art.40 (3).

**Root causes:** none.

**Safety recommendations:** none.



3.4.33 Railway incident happened on the 28th of August 2014, at 01. 45 o'clock, in the branch of the railway county Craiova, km.207+287, between the railway stations Banu Mărăcine and Craiova, on the track 1, where the freight train no. 20302-1, (belonging to the railway undertaking SC Rail Cargo Romania SRL) hit the co-acting signal RXBF of the entry signal XBF.

The investigation report was finished on the 2nd of October 2014.

**Direct cause** was the opening of the front door, on the left side in the running direction, from the container PVDU 330097-4, loaded on the wagon 31554575108-5, the 3rd from the locomotive of the freight train no. 20302-1, and hit of the plate with the inscription of the signal R<sub>XBF</sub> along the route of this train.

**Contributing factors:**

- the container doors were operated by unauthorized persons.

**Underlying causes:** none.

**Root causes:** none.

**Safety recommendations:** none.

3.4.34 The railway accident happened on the 24th of September 2014, at 13.45 o'clock, in the branch of the railway county Cluj, in the railway station Halmeu, along the entry route on the line 7, wide gauge, of the freight train no.48651/3651, consisting in 17 loaded wagons for wide gauge, hauled by the locomotive DA 1920 (belonging to the Ukainian railways – UZ), consisting in the derailment of the second bogie of the last wagon, in the running direction.

The investigation report was finished on the 22nd of December 2014.

**Direct cause** was the overclimbing of the exterior track of the curve by the wheel no.5 of the wagon no.52623642, at 7,6 m before the tip of the common crossing no.2, because the increase of the ratio between the guiding force and the load on the first wheel (wheel no.5), exceeding the stability limit at derailment. Increase of the ratio between the guiding force and the load on the first wheel was generated by:

- deviations over the limits accepted through the specific regulation, found out at the cross level of the track, these deviations led at high twisting of the line and, implicitly, at a serious transfer of load of the first wheel (wheel no.5);
- thickness of the flange of the wheel no.5, being under the minimum limit accepted by the Regulations for the use of the freight wagons in international traffic (PGV), it leading to the increase of the striking angle of the wheel no.5 against the rail and, implicitly, to the increase of the driving force.

**Contributing factors:** none.

**Underlying causes:**

- keeping of the wagon no.52623642 in the composition of the train no.3651/48651 and its routing from the railway station Diacovo (UZ), provided that the thickness of the wheel no.5 from this wagon was under the limit imposed by the Regulations for the use of the freight wagons in the international traffic (PGV).
- keeping in the line of unsuitable sleepers, in the curve afferent to common crossing no. 2, sleepers found out unsuitable during the inspection from 2013.

**Root causes:** none.

**Measures that were taken:**

During the investigation, in order to reduce the risks of accidents with similar causes, the branch of the railway county Cluj, within CNCF „CFR” SA, took the next corrective measures:

- re-distribution of the plan for the assembling of the common crossing at the intrested track sub-units;
- performance of additional measurements at the gauge and the cross level of the track in the area and of the adiacente curves;

- supply the Track District Halmeu with wooden sleepers for wide gauge lines.

**Safety recommendations Recomandări de siguranță:**

Taking into account the stipulations from the chapter *C.8.Additional remarks*, the investigation commission considers necessary the implementation of the next safety recommendation:

- starting by the railway public infrastructure manager CNCF „CFR” SA of procedures for the conclusion of a new border convention Romania - Ukrain, negotiated and signed for Romania, by the representatives of Romanian Railway Safety Authority – ASFR and of Romanian Railway Investigating Body – OIFR. In the new border convention, clear provisions shall be introduced, through which one establish that the railway staff involved in a railway accident/incident, occurred between or in the broder stations allow the access at the involved rolling stock and answer the questions of the authorized representatives of the country where the accident/incident happened.

3.4.35 The railway incident happened on the 12th of October 2014, at 20:24 o'clock, in the branch of the railway county Craiova, track section Piatra Olt - Băbeni (non-electrified single-track line), in the railway station Drăgășani, where the freight train no.60802-1 (belonging to the undertaking TRANSFEROVIAR GRUP S.A.) passed the exit signal, (being on „stop”) on stop position and bursting open the switch no.2, the freight train breaking the tip of switch.

The investigation report was finished on the 13th of Decembert 2014.

**Direct cause** was the lack of measures for stopping the freight train no.60802-1 before the exit semaphore „C”, from the end Y of the railway station Drăgășani, being on „STOP without passing the signal on stop position!”.

**Contributing factors:**

- performance of other activities and non-watching of the signal positions.

**Underlying causes:**

Infringment of the provisions from the Instructions for the activity of the locomotive staff no.201/2007 as follows:

- art.127, point.(1), letter a), concerning the compulsoriness of the locomotive staff to watch carrefully, along the route, the position of the fixed and mobile signals and of the indicators, put in accordance with the specific regulations in force;
- 137, paragraph (2), that stipulates that the driver’s assistant had to stay on his normal seat in the driving cab and watch carrefully the position of the signals, line condition and conditions for the entrance into the station, informing the driver in this respect;
- art.143, paragraph (2), that stipulates that the interventions at the locomotive for the removal of the problems appeared along the route shall be made only after stopping the train and ensuring it against the runaway.

**Root causes:** none.

**Safety recommendations:** none.

3.4.36 The railway incident happened on the 14th of October 2014, at 18:40 o'clock, in the branch of the railway county Brașov, between the railway stations Daneș and Dumbrăveni, on the track II, km.309+900, the passenger train no. 1530 (belonging to the railway undertaking SNTFC „CFR Călători” SA) hit the open door of a car on the working site FCC AZVI STRACO.

The investigation report was finished on the 2nd of December 2014.

**Direct cause** was the entrance in the train „free clearance” of the transport vehicle (dumper) that performed specific transports of broken stone in the line area.

**Contributing factors:** none.

**Underlying causes:**

- infringement by the transport vehicle of the the protection measures necessary during the works in the line area, on the non-entrance in the free clearance of the train.

**Root causes:** none.**Measures that were taken:**

After the beginning of the investigation, following the findings of the commission, S.C. CONSTRUCȚII EXCAVAȚII DVF S.R.L. changed the „Protocol on the risks of accidents, professional disease, fire, explosion and dangerous incident prevention”. At the point no.7 from the protocol, one stipulated special mentions on the compulsoriness to respect the train „free clearance”.

**Safety recommendations:** none.

- 3.4.37 The railway incident happened on the 23rd of October 2014, at 09.10 o'clock, in the branch of the railway county București, between the railway stations București Nord and Mogoșoaia, consisting in the exceeding of the accepted speed by the passenger train no.15073 (belonging to the railway undertaking SC Transferoviar Călători SRL). The investigation report was finished on the 26th of November 2014.

**Direct cause** was the human mistake consisting in the lack of attention of the driving/staff, that led to the exceeding of the maximum speed over the speed restriction of 15 km/h, included in the Sheet for the Restriction Notification (B.A.R).

**Contributing factors:**

- the driving staff of the motorised train was in practical training, having the right to drive the motorised train coordinated by the driver for the authorization.

**Underlying cause:**

- the locomotive staff did not comply with the provisions from the Instructions for the activity of the locomotive staff no. 201, art. 125 paragraph (3) respectively (4) on the meeting with the disposals written down in the Sheet for the Restriction Notification - B.A.R. and the control of the train speed so that it be under that ordered.
- the locomotive staff did not meet with the provisions from the Instructions for the activity of the locomotive staff no. 201, Art. 127, paragraph (1) letter.a) on the watching carefully of the indicator positions.

**Root causes:** none.**Safety recommendations:** none.

- 3.4.38 The railway incident happened on the 9th of November 2014, at 17.54 o'clock, in the branch of the railway county Galați, between the railway stations București Nord and Galați, the passenger train no.15073 (belonging to the railway undertaking SC Transferoviar Călători SRL) exceeded the accepted maximum speed, at its dispatching from the line 2 of the railway station Făurei. The investigation report was finished on the 20th of December 2014.

**Direct cause** was the non-compliance with the maximum speed, on the deflecting section, over the switches.

**Contributing factors:**

- lack of attention of the driving/ staff, consisting in the lack of watching of the indications of the speed recorder, of the fixed signals along the route.

**Underlying causes:**

Infringement of the provisions from:

- Instructions for the activity of the locomotive staff no.201/2007, art.125 paragraphs (1) and (4) and art.127 paragraph (1) letters a) and f);
- Signalling regulations no.004 art.7, paragraph (3).

**Root causes:** none.**Safety recommendations:** none.

3.4.39 Railway incident happened on the 30th of November 2014, at 14:29 o'clock, in the branch of the railway county Constanța, in the railway station Lehliu, in the running of the passenger train no.1986 (belonging to the railway undertaking SNTFC „CFR Călători” SA), consisting in the hit of the equipment DAM and of the sleepers afferent to the switch no.3 because the fall of the part SAB from the axle no.3 of the locomotive EA 613. The investigation report was finished on the 16th of December 2014.

**Direct cause** was the broken, followed by the entrance in the free clearance, of the adjusting bar from the brake slack adjuster type SAB afferent to the axle no.3, existing an old crack on about 40% from its section.

**Contributing factors:**

- failure of the lock against the fall of the brake slack adjuster SAB from the axle no.3.

**Underlying causes:** none.

**Root causes:** none.

**Measures that were taken:**

In order to prevent similar incident, SNTFC „CFR Călători” S.A. disposed through the paper no. D 4/10/983/03.12.2014 the next measures:

- during the intermediate overhaul type Pth3 and inspections performed at the exit from the traction units of the locomotives, one shall also perform the inspection of the locks against the fall (support against the fall) from each brake slack adjuster, concerning: their existence, if they are in suitable condition (corresponding fastening, broken wires, etc.), if it assure that the brake slack adjuster don not come down under limit of the inferior loading gauge of the locomotive, when the brake slack adjuster fractures and rests suspended on the lock, being forbidden the exit of the locomotives from the traction units with the locks against the fall missing or unsuitable.
- the traction units, from where the locomotives are routed for hauling the trains with running speed over 120 km/h, shall work out monthly programms for additional inspections at these locomotives, these additional inspections shall be made by: shift head, head driver, technical-engineering staff, etc., if case. The staff that performs the additional inspection shall sign in the on-board notebook of the locomotive, together the locomotive examiner.

**Safety recommendations:** none.

3.4.40. Railway incident happened on the 23rd of June 2014, at 02:00 o'clock, in the branch of the railway county Constanța, between the railway stations Saligny and Cernavodă Pod, km 170+270 – 170+350, in the running of the freight train no.30686 (belonging to the railway undertaking DB SCHENKER RAIL ROMÂNIA S.R.L.), consisting in the hit of 10 metallic bridge covering and other 2 were got away, because the fall of a wire bale from the 8<sup>th</sup> wagon from the rear of the train, because the opening of a door.

The investigation was closed on the 2nd of July 2014, because the re-classification upon the preliminary findings.

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

## Railway investigations for the period of time 2010-2014:

Investigated accidents <sup>(1)</sup>		2010	2011	2012	2013	2014	TOTAL
Accidents (Art.19, 1 + 2)	Train collisions	3	2	-	-	1	6
	Collisions between trains and obstacles	-	-	-	-	-	-
	Train derailments	9	19	20	18	16	82
	Level crossing accidents	-	-	1	-	1	2
	Person accidents generated by the rolling stock in motion	-	-	-	-	-	-
	Rolling stock fires	2	15	2	4	1	24
	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>Incidente</b>	<b>22</b>	<b>29<sup>(2)</sup></b>	<b>16<sup>(3)</sup></b>	<b>17</b>	<b>20</b>	<b>104</b>	
<b>TOTAL</b>	<b>36</b>	<b>65</b>	<b>39</b>	<b>39</b>	<b>39</b>	<b>218</b>	

<sup>(1)</sup> one took into account 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 incidents ended in 2012.



## 4 RECOMMENDATIONS

### 4.1. Brief revision and presentation of the recommendations

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 ending	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.	76059	freight	Catusa	24.09.2013	12:07	09.01.2014	<b>accident</b>	One bogie of the wagon derailed	
		The freight train no.76059 belonging to the railway undertaking SNTFM „CFR Marfă” S.A., running in the branch of the railway county Galati, in the railway station Catusa, at the crossing over the interlocking switch no. 6, one bogie of the last wagon derailed.							
		Issued recommendations	2	Supplement of “Regulations on the performance of railway shunting/transport on industrial branches” with provisions that establish in detail the responsibilities on the traffic safety, of the functions involved in the reception/dispatching of trains, including the correlation of the name of these functions with those from the instructions and specific regulations in force					
		Implemented recommendation (closed)	2	Updating or issuing of new instruction regulations for the establishment in detail of the responsibilities of the factors involved in the train traffic safety with dispatching from/or on another infrastructure as the public one.					
2.	23817	freight	Pui	02.02.2013	01:34	21.01.2014	<b>accident</b>	Derailment of two wagons	
		At the freight train no.23817, belonging to the railway undertaking SNTFM „CFR Marfă” SA), running in the branch of the railway county Timișoara, track section Simeria - Livezeni (electrified double-track line), in the railway station Pui, the last 2 wagons (loaded with coal) derailed, because the circular fracture of the membrane from the wheel no.2 (cast wheel ), the last but one.							
		Issued recommendations	1	Immediate identification of all SNTFM wagons provided with cast wheels made from the charge no.55743 IOB 1991 and their withdrawal from traffic in order to perform the checking imposed by the regulation in force at the assembled wheels for the founding of the possible cracks at their membrane, rim and boss and the application of the necessary provisions.					
		Implemented recommendation (closed)	1	The railway undertaking SNTFM “CFR Marfa” SA, in the answer sent through the paper no. 2010/300/03.06.2014 notified the implementation of the safety recommendation issued following the investigation of this railway accident.					
3.	89401	freight	Suplacu de Barcau – Simleu Silvaniei	04.10.2013	15:44	19.02.2014	<b>accident</b>	One bogie of a wagon derailed	

		At the freight train no. 89401, belonging to the railway undertaking SC Grup Feroviar Român SA, running in the branch of the railway county Cluj, between the railway stations Suplacu de Barcău and Șimleu Silvaniei (non-interoperable track section managed by SC APRIA SRL), km.53+730, derailed the first bogie of the 18th wagon.						
		Issued recommendations	1	Identification of measures necessary to keep under control the derailment risk on the track section Suplacu de Barcău – Șimleu Silvaniei by the decrease of the effects of the factors that contributed at the railway accident.				
		Implemented recommendation (closed)	1	Romanian Railway Safety Authority, through the answer sent by the paper no.2010/300/03.06.2014, notified the implementation of the safety recommendation issued following the railway accident investigation				
		Tower wagon + freight	Monor Gledin - Rapa de Jos	16.10.2013	00:43	03.03.2014	<b>Serious accident</b>	One bogie of a wagon derailed
		The freight train no. no.50473-2 (belonging to the railway undertaking SC Unicom Tranzit SA), running in the branch of the railway county Cluj, between the railway stations Monor Gledin and Râpa de Jos, km.33+300, was overtook and hit by the train no.48924 (tower wagon DP 58 belonging to District LC Sărățel), leading to the the derailment of the second axle of the tower wagon, in the running direction, and the injury of 16 persons from the cabin of the tower wagon.						
		Issued recommendations	3	A. supplement of the regulation framework with provisions for the way to train, examine and authorize the attendant agent of the tower wagon.				
	B. supplement of the continuity regulations with provisions for the ensurance of the authorized staff for the driving of the tower wagons after interventions that interrupt the rest time.							
	C. correlation of the provisions from the Instructiona 340/2003 and of those from the Regulations no.005/2005 for routing and running of UAM.							
		Recommendations in implementation progress (open)	3	Romanian Railway Safety Authority, through the answer sent by the paper no. 2010/5041/03.07.2015, notified that for the first and third recommendations (recommendations A. and C.) took measures for implementation.				
	Up to the drawing up of the report, no answer from Romanian Railway Safety Authority on the level and way of implementation of the second safety recommendation (recommendation B.), issued following the investigation of this railway accident, was received.							
		freight	Fiad – Telciu	08.05.2013	17:45	07.04.2014	<b>accident</b>	Derailment of 9 wagons
		At the freight train no.43622, belonging to the railway undertaking SNTFM "CFR Marfă" SA, running in the branch of the railway county Cluj, between the railway stations Fiad and Telciu, 9 wagons derailed, from 28th wagon to 36th wagon (3 wagons turned over).						
		Issued recommendations	1	Taking of necessary measures so that the operation staff understand exactly and unambiguously the application conditions of the provisions from the art.6 paragraph (16) from the Regulations for hauling and braking no.006, concerning the remaining in the initial position in the train composition, for continued running, as hauled vehicles and without be active in the train hauling, of the locomotives that have been used as banking ones.				
		Implemented recommendation (closed)	1	Romanian Railway Safety Authority, through the answer sent by the paper no. 2010/545/06.07.2015, notified the implementation of the safety recommendation issued following the railway accident investigation.				
4.	48924 + 50473 -2							
5.	43622							

		passenger	Praid – Sovata	04.12.2013	7:30	30.06.2014	accident	Hit of a motorized train by a car
		The freight train no. 14630 (belonging to the railway undertaking SC REGIOTRANS SRL), running in the branch of the railway county Braşov, between the railway stations Praid and Sovata (non-interoperable line managed by SC RC-CT Trans SRL), at the level crossing from km 109+410, provided with road sign and mechanical barriers, was hit by the car, leading to the derailment of one axle of the motorised train trailer, injury of the car driver, damage of the car.						
6.	14630	Issued recommendations	3	<p><b>A.</b> Harmonization of the Regulations for the operation of the track section Târnaveni-Praid (worked out by CNCF „CFR” SA) and of the Regulations on the functioning of the barriers of the level crossing from the track sections Blaj-Praid, Vânători-Odorhei, Alba Iulia-Zlatna (worked out by the manager of non-interoperable infrastructure SC RC-CF TRANS SRL Braşov) through corroboration with the provisions of the Regulations for the train running and railway vehicle shunting - no.005/2005 (approved by Order of Minister of Transports, Constructions and Tourism no.1816/26.10.2005) with those from standard SR 1244-3/1990, standard SR 1244-2/2004 and standard SR 1244-1/1996, on the classification of the level crossing from km 109+400 between the railway stations Praid and Sovata and its railway and road signaling.</p> <p><b>B.</b> Supplement of the regulation framework with detailed provisions on the way to cross a level crossing of current line, for which there is not ensured the rombul de vizibilitate and no barriers, by the trains, also the cases where the signalling systems of the level crossing are out of service or damaged, so that the risk of accident be kept under control.</p> <p><b>C.</b> Organization by the administrators/managers of the interoperable/non-interoperable public railway infrastructure of some join actions with the administrators of roads and with the Road Direction within General Romanian Police Inspectorate in order to check all the level crossing that work in conditions similar to that from 109+400 between the railway stations Praid and Sovata and if case, taking of necessary measures, in order to keep under control the risk of accidents.</p>				
		Recommendation in implementation progress(open)	1	Romanian Railway Safety Authority, through the answer sent by the paper no.2010/631/13.10.2014, notified that for the first recommendation (recommendation <b>A.</b> ) took measures for its implementation.				
		Non-implemented recommendation (closed)	2	Romanian Railway Safety Authority, through the answer sent by the paper no. 2010/631/13.10.2014, notified about the second and third recommendations ( <b>B.</b> and <b>C.</b> ), that they can not be followed.				
7.	9358	passenger	Rosiori Est – Rosiori Nord	02.06.2014	03:27	04.07.2014	incident	The train passend the signals on stop position
		The passenger train no.9358, belonging to the railway undertaking SNTFC "CFR Călători" SA, running in the branch of the railway county Craiova, between the railway stations Roşiori Est and Roşiori Nord, passed the signal Yu on stop position „STOP without passing the signal on stop position”.						

		Issued recommendations	1	Identification of the signals of entrance on the block system that perform also the caution function of the entry signal and put in connection, if case, of the signalling with the pegs stipulated by the Regulations for signalling no.004 and the Regulations for railway technical operation no.002.				
		Implemented recommendation (closed)	1	Romanian Railway Safety Authority, through the answer sent by the paper no.2010/560/10.07.2015, notified the implementation of the safety recommendation issued following the railway accident investigation.				
8.	93849	freight	Isalnita – Cotofeni	08.05.2014	00:50	29.09.2014	<b>accident</b>	One bogie of a wagon derailed
		At the freight train no.93849, belonging to the railway undertaking SNTFM "CFR MARFĂ" SA, running in the branch of the railway county Craiova, between the railway stations Işalniţa and Coţofeni, km 264+000, the first bogie of the 9th wagon, in the running direction, derailed.						
		Issued recommendations	1	Identification of measures for the keeping under control of the risk afferent to the partial unloading of the wagons by the beneficiaries.				
		Implemented recommendation (closed)	1	Romanian Railway Safety Authority, through the answer sent by the paper no.2010/630/10.10.2014, notified that can not apply the safety recommendation issued following the railway accident investigation, because it considers that its implementation could infringe the provisions of art.16, paragraph 1 of the Law no.24/2000.				
9.	88395	2 gang cars	Palas – Constanta Marfuri	10.03.2014	12:15	29.08.2014	<b>accident</b>	One axle of the gang car derailed
		At the work train no. 88395, consisting in the gang cars DCL 033 and DCL 007, belonging to CNCF „CFR” SA, running in the branch of the railway county Constanţa, between the railway stations Palas and Constanta Marfuri (non+interoperable track section managed by SC GFR SA), km 1+200, the first from the gang car DCL 033, in the running direction, derailed.						
		Issued recommendations	1	Working out of the normative framework for the operation, traffic and maintenance of the gang cars type DCL, on the keeping under control of the determinant elements of the traffic safety.				
		Recommendations in implementation progress (open)	1	Romanian Railway Safety Authority, through the answer sent by the paper no.2010/577/17.09.2014, notified that the safety recommendation issued following the railway accident investigation is in implementation progress.				
10.	50406-1	Freight	Predeal – Timisu de Sus	13.04.2014	00:07	03.12.2014	<b>incident</b>	Exceeding of the accepted maximum speed
		The freight train no.50406-1 (belonging to the railway undertaking SC Unicom Tranzit SA Bucureşti), running in the branch of the railway county Braşov, track section Braşov – Ploieşti Vest (electrified double-track line) between the railway stations Predeal şi Timişul de Sus, on the track I ,exceeded the maximum accepted speed.						
		Issued recommendations	2	Introduction, into the timetable with the freight train running, of the percentages of minimum braked weight for the freight trains, that include wagons provided with brake proportional to the load and that run on the track sections with big slopes.				

				Regulation of the communication way, used by the railway undertaking in relation to the railway public infrastructure administrator C.N.C.F. „CFR” S.A, to send information concerning the existence in the train forming of wagons with brake proportional to the load or the existence and functioning of the electric brake at the hauling locomotives of the train.				
		Recommendations in implementation progress (open)	2	Romanian Railway Safety Authority, through the answer sent by the paper no.2010/159/25.02.2015, notified that the safety recommendations issued following the railway incident investigation shall be taken into account for the implementation.				
		Freight	Halmeu	24.09.2014	13:45	22.12.2014	accident	One bogie of a wagon derailed
		The freight train no.48651/3651, consisting in 17 loaded wagons, hauled by the locomotive DA 1920 (belonging to the Ukainian railways – UZ), running in the branch of the railway county Cluj, in the railway station Halmeu, along the entry route on the line 7, wide gauge, the second bogie of the last wagon, in the running direction, derailed.						
11.	48651 / 3651	Issued recommendations	1	Starting by the railway public infrastructure manager CNCF „CFR” SA of procedures for the conclusion of a new border convention Romania - Ukrain, negotiated and signed for Romania, by the representatives of Romanian Railway Safety Authority – ASFR and of Romanian Railway Investigating Body – OIFR. In the new border convention, clear provisions shall be introduced, through which one establish that the railway staff involved in a railway accident/incident, occurred between or in the broder stations allow the access at the involved rolling stock and answer the questions of the authorized representatives of the country where the accident/incident happened.				
		Implemented recommendation (closed)	1	Romanian Railway Safety Authority, through the answer sent by the paper no.2010/300/03.06.2014, notified the implementation of the safety recommendations issued following the railway accident investigation				

**DIRECTOR**  
**Phd. Vasile BELIBOU**