

SOUTH CENTRAL RAILWAY
HEADQUARTERS SAFETY ORGANISATION
BI-MONTHLY SAFETY BULLETIN – JULY & AUGUST 2023

DETAILS OF ACCIDENT AND UNUSUAL THAT OCCURED DURING JULY 2023.

Brief of the Accident : On 07.07.2023 at 11:01 hrs., while Train No. 12703 (UP Falaknuma Express from Howrah Jn. to Secunderabad Jn.) was on run, fire has initiated at the roof (Dome) of S4 coach at about 10:58 hrs, which is 3 minutes prior to the experience of heat and burning smell by passengers and may be 5 minutes prior to the ACP. Subsequently spread to other adjacent coaches S6, S5, S3, S2 of 12703 (UP Falaknuma Express) (HWH–SC) in midsection between BOMMAIPALLI (BMMP) – PAGIDIPALLI (PGDP) Junction Stations on Guntur (GNT) – Pagidipalli (PGDP) section of GNT Division, due to delay in isolation of coaches and due to the tunnel effect on wind in the cutting at Km.6 resulted in spread of fire and subsequently led to the extensive fire due to combustible materials of coach furnishings, passengers luggage and wind.

The first video captured by a passenger of Coach S4 berth No.34 shows billowing smoke from the roof first and second ventilators of the S4 coaches towards S5 end only and this fact is corroborated by the evidence deposed by another passenger of the same Coach.

As the entire coach suspected for the initiation of fire has been reduced to ashes, there may be two possibilities of initiation of fire, one due to the insertion of burning cigarette/ beedi butts in gaps/ crevices/ cracks etc., in the coach and another due to the heating of electrical wiring/ joints due to the use of other than the mobile chargers from mobile charging points without 500 m Amps glass fuse protection.

There was no casualty / injury to any person.

This accident is categorized as Consequential Accident – B3.

Cause of the Accident :

1. After examining the circumstantial evidences, depositions, cross examinations of the witness (Railway staff and passengers of Train No. 12703), Joint Observations taken by the subordinates and Branch officers of GNT division on the affected as well as unaffected coaches, POH and IOH records of the affected coaches, detailed inspection and the measurement of same vintage S11 coach (SCR-WGSCN-087201), initial statement of the passengers travelling in S4 coach, and first video of the S4 coach at 11:07:23 hrs. available, the Enquiry Committee is of the view that the fire has initiated from the roof of S4 coach (SCR-WGSCN-087208) at about 10:58 hrs while the train was on run.
2. The exact cause of initiation of fire could not be confirmed by any of the witnesses either the passengers who travelled in the affected coach from where the fire had started or anyone else. The coach interior was completely burnt to ashes and nothing could be established as to the root cause of the fire initiation. But analysing all the clues and evidences available, cross examination of witnesses and by comparing the upkeep and general condition of the healthy / unburnt ICF coaches of the same vintage of the fire affected rake i.e., S11 (SCR-WGSCN-087201) & S7 (SCR-WGSCN-057253), the probable cause of fire could be through the lighted cigarette / beedi butts inserted in the gaps in the coach or any other material carried or sparking at the weak joints in the electrical wiring.
3. Initial video taken by one passenger at 11:07:23 hours indicate emission of smoke from the first and second roof ventilator of the S4 coach at S5 end and rapidly progressing towards S3 end due to tunnel effect in the cutting and spreading to adjacent coaches. LP, ALP and Train Manager of the train initially tried to uncouple the coaches, however could not succeed due to binding of BP and FP Hose pipe palms with sealing wires, non-working of universal key for releasing the CBC coupling operating handle and breaking the universal key in the process. Finally, the coaches on fire could be uncoupled with the help of engineering staff (Gangmen) at about 12:05 hours causing damage to 5 coaches S6, S5, S4, S3 and S2.
4. In all likelihood, the initiation of the fire could not be established with certainty as per the available evidences.

5. The officials of CFSL (Central Forensic Science Laboratory) visited the spot on 07.07.2023 and collected the samples from the fire affected coaches for examination. The report from the CFSL, Telangana received and enclosed which also states that “neither inflammable hydrocarbons nor explosive substances are found”. Further forensic report also states “there is no significant effect of short circuit in burnt copper wires.”

RESPONSIBILITY :

PRIMARY : NONE

SECONDARY : NONE

BLAMEWORTHY :

1. Primary Maintenance Depot, Secunderabad (C&W and TL),
2. LP of Train No. 12703 Exp. on 06/07.07.2023,
3. ALP of Train No. 12703 Exp. on 06/07.07.2023,
4. Train Manager of Train No. 12703 Exp. on 06/07.07.2023,
5. CLI / GNT (Nominated to LP),
6. CCC / GNT.

RULES VIOLATED : NIL

MATTERS BROUGHT TO LIGHT

1. Non uniform practice of coach wiring insulation measurement and testing during POH and IOH.
2. No supervisory check of electrical system after primary maintenance of rake.
3. Mobile charging points without glass fuse or fuse blocks bypassed or UNWIRED conditions.
4. No use of conduit pipe for retrofitting wiring in coaches.
5. Presence of joints in coach wiring.
6. Overwritten Insulation value in records of S4 coach after POH.
7. Non-availability of CML box in Locomotives or Tools with LPs

8. Non-availability of CML box or Tools with CCC/GNT office to recoup the missing CML boxes or Tools with LP
9. Failed system of inspection of CML Boxes and corrective action. CLI monitored the LP for six times during the last one year. Except one trip in Vande Bharat trip, CML boxes were available without tools. As per CEE Lr. No. E.221/TRS/Policy/Loco/Vol.VI dated 09.01.2018 "JPO revised - I" Point No.15 stating that "Crew depot in-charge shall do routine periodical check of CML box once in a month and endorse in tool book. Same is not followed.
10. Defective Procedure for loading/ unloading of CML Boxes. CCC/GNT did not make any inspection in this regard. The issue of CML box must be resolved immediately. The JPO issued in this regard by HQ (i.e., CEE/OP) required to be reviewed as being practically non-workable. Crew must carry and possess all essential tools/equipment with them.
11. Procurement of Universal Keys for CBC operating handle unlocking. There are number of variations and non-standard type of universal keys has been supplied to LPs/ ALPs & TMs. The SSE/C&W/GNT had procured these non-standard keys in GNT division without following RDSO standard drawings. Same should be withdrawn. The universal keys for train managers are being procured by Sr. DOMs in divisions and the same is also non-standards.
12. Absence of Standard Operating Procedure (SOP) for isolation of coaches in case of fire in electrified territory with traction power. After fire reported in S4 coach at 11:05, it took about one hour to isolate the affected coaches from rest of the formation as OHE was switched off and after about 30 minutes it was again switched on for isolating with same locomotive.
13. No quality checks procedure for Glass wool procured by LGDS to ensure fire retardant capability.
14. Non-attendance of missing beadings, cracks, crevices and breakages in the decolum sheets of the interior of the coaches.
15. Non-compliance of OBHS tender condition. As per clause 3.15, Supervisor is supposed to keep smart phone in working condition with power bank and must send the photograph

with geo-tagging facilities to SSE/C&W. This is not followed, and SSE/C&W stated that he possesses the photographs but failed to produce any photograph taken by his OBHS staff of affected Falaknuma express train.

16. Absence of training to Staff in preparation of joint note and typical sketch of the accident site as per Annexure-II Para 508 of the Accident Manual.
17. Non-maintenance of log of events at the accident site.
18. Noncompliance of Para 501.2 of Accident Manual (Action by Safety Team/ Accident In-charge), due to which the divisional Safety Organisation failed to co-ordinate to seize and collect clues and the vital evidences from the accident site, preserve them and handover to the Enquiry committee at the start of enquiry, which would have facilitated / enabled the Enquiry Committee to expedite the conclusion.
19. Non- attendance of calls on the TPC phone at GNT in emergency.
20. Non-provision of TPC conversation recording facility as to that of Control circuit in GNT division.
21. Delay in starting / turning out both the MRVs at GNT & SC by 11 minutes & 14 minutes extra respectively instead of normal turning out time.
22. No nominated in charge of MRV at SC and GNT due to ambiguity in the Disaster Management Plan.
23. No RPF escorting of train between BZA to SC of this train.

SUGGESTIONS AND RECOMMENDATIONS

1. In view of the stoppage of midlife rehabilitation of the ICF coaches, it is required to reiterate the instructions to change the codal life completed aluminum wiring with strict verification for its condition while turning out the coaches after POH.
2. Regimen for supervisory check of electrical systems after primary maintenance of rake at Secunderabad Coaching Depot and other Coach Depots is required to be introduced.

3. Adequate Staffing of TL gang at SC Coaching depot along with supervisors in all shifts is to be done.
4. Format of IOH is required to be revised and made as per the Checklist prescribed for the IOH with respect to the Train lighting and issued for uniform adoption over the zone.
5. Certification with respect to the Train lighting after IOH must be from the Electrical Supervisor.
6. Strengthening of Primary Maintenance Gangs as per the pattern of repair in different rakes is required to be done. For example, it was reported that cracks, crevices, breakages etc. is noticed more particularly in the North bound trains.
7. Fire retarding property of the glass wool used in the coaches is required to be confirmed and Consignee inspection of Glass wool procured in LGD workshop is required to be made methodical and must be based on the quality check reports and time to time sample checking for the fire retarding property.
8. The issue of CML box must be resolved immediately. The JPO issued in this regard by HQ (CEE/OP) is required to be reviewed as being practically non-workable. Crew must carry and possess all essential tools/equipment with them.
9. Prescribed tools need to be carried by LPs essentially as per the latest RB letter No. 2019 / Elect (TRS) / 440 / 6 Line Box dated 19.07.2023.
10. Running staff as well as on board staff should be trained in isolation of CBC Couplings and they should be imparted practical training for coupling & de-coupling with the keys supplied to them during their training / refreshers course.
11. The universal key (CBC) which is to be supplied to the LP & Train Manager should be standard as per RDSO drawing and should be procured and supplied by C&W department to other including LPs/ALPs/TMs and other on-board staff.
12. All OBHS staff are to be trained in the operation of fire extinguishers and a record of such activity by name is to be maintained in the depot.

13. All the mobile charging points of the coaches to be provided with glass fuse and bypassing /direct supply practice should be stopped.
14. Standard operating procedure (SOP) is to be issued for isolation of coaches in case of fire in electrified territory with traction power.
15. Strict enforcement of OBHS Contract Conditions: OBHS staff supervisor (EHK) as per tender condition clause 3.15 of contract agreement is supposed to keep smart phone in working condition with data facility, power bank and must send the photograph with geo-tagging facilities to SSE/C&W, failing which suitable penalty shall be imposed. This was not followed, and SSE/C&W stated that he possesses the photographs but failed to produce any photograph taken by his OBHS staff of affected Falaknuma express train.
16. Random checks to create the semblance of presence of staff in the train.
17. Manning of coaches by TTEs: TTE was not available from GS to S-5 coach of the train. The system of allotting coaches by CTI to other staff is adhoc and need to be reviewed to create the semblance of presence of staff in the train.
18. System of random patrolling by RPF staff may be adopted covering all train to create the semblance of presence of security staff in the train to act as deterrent for unlawful activities like smoking, littering etc.
19. A workshop to cover all safety officers and supervisors of HQ and divisions in the accident site management, photography, preservation of clues and evidences in standard format, log of the event etc.

ATTENTION STATION MASTERS

S.R. 5.21.1. "Loose shunting" means vehicles being pushed by an engine and being allowed to run forward unattached. No vehicle shall be loose shunted unless provided with an efficient hand-brake or unless the vehicle is attached to at least another vehicle fitted with an efficient hand brake. A loose shunted vehicle shall be accompanied by a railway servant to pin down the hand-brake, when necessary.

S.R. 5.21.2. Loose shunting of or against loaded or empty oil tank wagons, vehicles containing petrol or kerosene oil in tins, trucks loaded with heavy machinery, rails or timber, cranes, loaded explosive vans, wagons loaded with live stock or military consignment, articles mentioned in the Indian Explosive Act, wagons labelled 'not to be loose shunted' and coaching vehicles, even if empty, is prohibited.

S.R. 5.21.3. "Fly shunting" is a shunt movement in which two or more vehicles to be moved, after being given an impetus by an engine (with or without other vehicles attached) are separated at the points, by the points being reversed smartly between the vehicles, in order to send them on to different lines. Fly shunting is strictly prohibited except for hump shunting in hump yards.

ATTENTION Engineering

S.R. 15.26.6. Working of private Trolleys :- No private Trolley shall be used by non-railway official except under special permission of PCOM.

S.R. 15.26.7. Trolleys following one another Trolley :- When two Trolleys or more are running together in the same direction on the same line, care shall be taken to ensure that they are kept at least one OHE mast or 75 metres apart.

S.R. 15.26.8. Spring points/Catch siding :- The official in-charge of the Light Motor Trolleys/ Moped Trolleys/scooter Trolleys shall stop short of the spring/ catch siding points, lift it off the track, if necessary and place it on the correct line, before proceeding further.

ATTENTION LOCO PILOTS / ASISTANT LOCO PILOTS/GUARDS

6.03. Protection of trains stopped between stations. :-

SR 6.03.7. Then he (LP) should reduce the speed of his train to 20 KMPH during day and when visibility is clear and 10 KMPH when visibility is not clear and during night time. He should approach the disabled train at such a restricted speed (not exceeding the speed limits mentioned above) that will enable him to stop his train short of any obstruction. He should then bring his train to a stop as near to the engine of the disabled train as possible and shall find out from the Loco Pilot of the latter the cause for putting on the flashing light and render all possible assistance to the affected train. He will continue his journey at normal speed, only after ascertaining that the line on which he is proceeding is free from any obstruction. If, however, he finds that the line on which he is to proceed is obstructed, the Loco Pilot and Guard of that train will protect their train by placing detonators etc., as per GR 6.03.

The Loco Pilot of the train proceeding on the adjacent track, if any, shall invariably stop at the next station and report the occurrence immediately and the assistance required.