

Fire in Trains/Railway Coaches

Causes & Preventions

Why prevention of fire in trains?

What Statistics says.....

Years 12-13 9/100

Year	collision	Derailments	L/Crossing	Fire	Misc	Total
12-13	6	40	58	9	0	100
13-14	4	53	51	7	3	118
14-15	5	63	56	6	3	135
15-16	3	64	35	0	4	106
16-17	5	77	20	1	0	103
17-18	3	53	13	3	0	72
18-19	0	46	6	6	1	59
19-20	5	40	1	7	1	54
20-21	1	17	1	3	0	22
21-22*	1	18	1	2	0	22

* current year till date

YEAR 21-22 2/22

Train Fire vis a vis other

- A train fire is different from a fire in other places in the manner in which it breaks out, grows and spreads. Fire on a running train is more dangerous than a static one, because the fanning effect may spread the fire very quickly to other coaches and in panic the passengers might jump out of running train as it had happened in past.

Train Fire vis-a-vis others

- Fire especially in uncontrolled state is a source of very rapid destruction. Hence all possible steps to prevent a fire from breaking out in coaches, and if it breaks out, to prevent it from spreading and causing further damage are of paramount importance.
- Coaches are crowded and on the move making it difficult to manage

How we see Fire accident officially

Categorized under

- Train accidents
 - Consequential train accident
 - Fire -all cases under cat B1-B7
(seriousness can be understood from the fact that it is categorized just after collision)

Fire in train has been classified in B1 to B7 Categories

- B-1: Fire in a train carrying passengers, resulting in Loss of human life and /or grievous hurt and /or
Damage to Railway property of the value exceeding Rs. 2 crores and /or
Interruption of any important through line of communication for at least 24 hours.
- B-2 : Fire in a train not carrying passengers, resulting in
Loss of human life and /or grievous hurt and /or
Damage to Railway property of the value exceeding Rs. 2 crores and /or
Interruption of any important through line of communication for at least 24 hours.

B-3 Fire in a train carrying passengers not falling under B-1 above but

- i. Loss to Railway property is Rs.50,000/above & or
- ii. Interruption to traffic is more than the threshold value and / or
- iii. Resulting into detachment of coaching stock/ stocks from the train.











B-4 Fire in a train not carrying passengers not falling under B2 above but

- i. Loss to Railway property is Rs.50,000/ above &/or
- ii. Interruption to traffic is more than the threshold value and / or
- iii. Resulting into detachment of goods stock/ stocks from the train.

- B5 Fire in a train carrying passengers not falling under B-1 or B-3 above.
- B6 Fire in a train not carrying passengers and not falling under B-2 or B-4 above.
- B7 Fire occurring in shunting, marshalling yards, loco yards and siding etc. involving rolling stock but not involving a train.

CLASSIFICATION OF FIRES

- Fires are *classified* according to the type of *fuel that is burning*.
- If you use the *wrong type of fire extinguisher* on the *wrong class of fire*, you might make matters worse.
- Its very important to understand the *five different fire (fuel) classification*

		Ordinary Combustibles	Wood, Paper, Cloth, Etc.
		Flammable Liquids	Grease, Oil, Paint, Solvents
		Live Electrical Equipment	Electrical Panel, Motor, Wiring, Etc.
		Combustible Metal	Magnesium, Aluminum, Etc.
		Commercial Cooking Equipment	Cooking Oils, Animal Fats, Vegetable Oils

- **Type of Fire Extinguishers & its uses:**

- Portable fire extinguishers are classified by the type of fires they are designed to extinguish. There are five basic classifications of fire extinguishers. Extinguishers are labeled with either letter-shaped or pictorial symbols that indicate what types of fires they are intended for.
- It is vital to know about type of extinguishers. Using the wrong type of extinguisher for extinguishing of fire can be life-threatening. Locos, EMU's and AC coaches are being provided with DCP types of fire extinguishers, considering it is the most suitable for electrical fires.

a) Wet Chemical extinguisher - The wet chemical extinguisher is a specialized type primarily focused on class K fires, those involving cooking media such as animal and vegetable fats or oils. These extinguishers contain a solution composed of potassium that effectively launches a two-pronged assault on fires. First, the liquid mist it sprays acts to cool the fire. Second, due to the chemical reaction of the solution with the cooking medium, a thick soap-like substance forms, sealing the surface of the liquid to prevent re-ignition.

- b) DCP (Dry Chemical Powder) extinguishers** come in a variety of types and are suitable for a combination of Class A, B, C & D fires. These are filled with foam or powder and pressurized with nitrogen.
- DCP (Dry Chemical Powder) extinguishers have an advantage over CO₂ extinguishers since they leave a non-flammable substance on the extinguished material, reducing the likelihood of re-ignition.
- c) Water extinguisher or APW extinguishers** (air pressurized water) are suitable for Class A fires only. Never use water extinguishers on grease fires, electrical fires, or Class D fires – the flames will spread and make the fire bigger. Water extinguishers are filled with water and are typically pressurized with air. Again water extinguishers can be very dangerous in the wrong type of situation. Only fight the fire if you're certain as it contains ordinary combustible materials only.

d) Foam extinguisher - Foam fire extinguishers are suitable for class A and the flammable liquids of class B, though not effective for gaseous fires. They spray a type of foam that expands when it hits the air and blankets the fire. This blanket prevents the vapours from rising off the liquid to feed the fire, thus starving it of fuel. Also, because the foam is mixed with water, it has a cooling effect as well. Foam extinguishers are some of the best for liquid fires, such as gasoline fires, but can also be used on Class A fires involving solid combustibles like wood.

- **Carbon Dioxide (CO₂) extinguishers** are used for Class A, B and C fires. (CO₂) extinguishers contain dioxide, a non-flammable gas, and are highly pressurized. The pressure is so great that it is not uncommon for bits of dry ice to shoot out the nozzle. They don't work very well on class A fires because they may not be able to displace enough oxygen to put the fire out, causing it to re-ignite. CO₂ extinguishers have an advantage over DCP (Dry Chemical Powder) since they don't leave a harmful residue – a good choice for an electrical fire on a computer or other favourite electronic device such as a stereo or TV.

Controlling Fire Cases By way of.....

Retarding the spread of fire

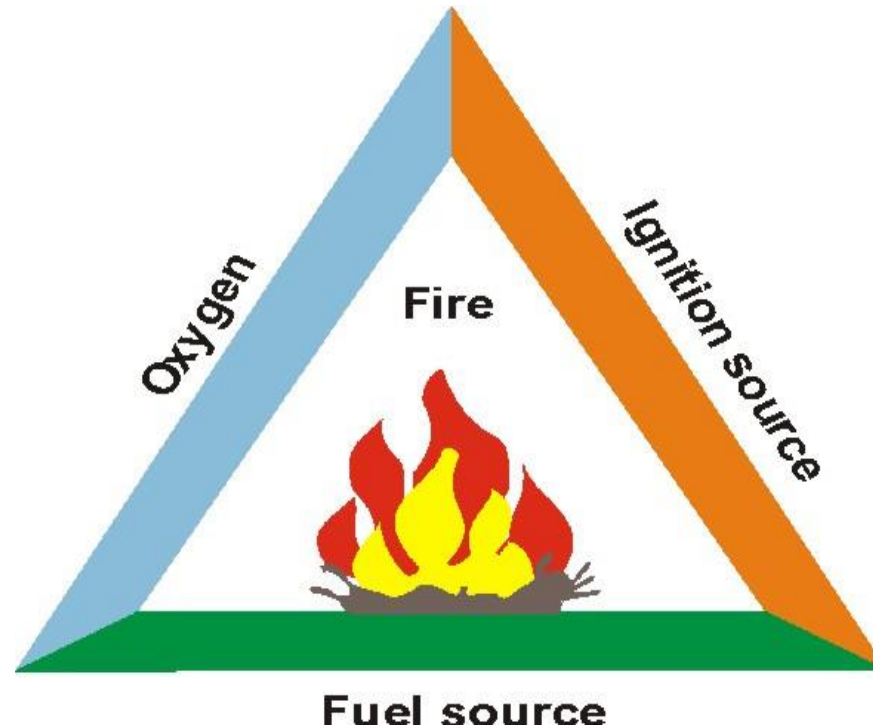
- ✓ *Manufacturing Fire Proof coaches*
- ✓ *Providing Fire retardant material in the existing coaches*

Arresting main source of fire i.e. miscreant & careless act by

- ✓ *Public awareness programme*
- ✓ *Monitoring*

Firefighting

CHARACTERISTICS OF FIRE



By eliminating any one of the element, fire can be extinguished

Measures to Improve Safety of Coaches:

- **Introduction of Automatic Fire and Smoke Detection system in AC Coaches:**

To improve fire safety in running trains, Automatic Fire and Smoke Detection System are being provided in AC coaches. The specifications have been upgraded integrating the air brake system in the coaches with the fire and smoke detection system.

Contd..

- At present in nearly 2063 AC coaches, this system has been fitted. The work is being carried out in a phased manner.
- Further, instructions have been issued to Production Units that all newly manufactured AC coaches shall be provided with Automatic Fire and Smoke Detection System.

Fire detection & suppression system in Pantry cars and Power cars

- Power Cars are more prone to fire due to presence of Diesel Alternator sets along with fuel tanks and other high voltage equipment. Also, Pantry Cars are more prone to fire due to cooking being carried out in these coaches. In this respect Automatic Fire Detection and Suppression system are being provided in Power cars and Pantry cars.

Contd..

- At present 1128 Power cars and 278 Pantry cars are fitted with this system. The work of retro fitment is being carried out progressively.
- Further, instructions have been issued that the system should be provided in all newly manufactured LHB Power cars and LHB Pantry cars by the Production Units (PUs).

Improving fire Retardancy in Coaches (MECH)

- Coaches are being provided with fire retardant furnishing materials such as Fire retardant curtains, partition paneling, roof ceiling, flooring, seat and berths along with cushioning material and seat covers, Windows and UIC Vestibules etc.

Contd..

- The specifications of these items are being upgraded from time to time as a part of continual improvement.
- In the specification of major furnishing items, now a new parameter related to fire retardancy (i.e. heat release rate) has been introduced as per international norms.

Improving fire Retardancy in Coaches (ELEC)

- The air-conditioned coaches are provided with E-beam irradiated thin walled elastomeric cable as per RDSO specification no. RDSO/SPEC/ELC/0019 (Rev “0”) 2002.
- The layout and cable harness scheme for electrical wiring in the coaches are such as to minimize the number of joints and junction boxes.

Contd..

- The maintenance units of railways are directed to ensure the use of proper sizes of cables in different circuits as per standard designs of production units for these coaches.
- Positive and negative cables for train lighting system working with 110 V DC are run in separate conduits.

Provision of Fire Extinguishers

- Dry chemical powder type fire extinguishers are provided in all Air-conditioned coaches, Second class cum-guard and luggage van and Pantry cars. Instructions have been issued to Production Units to provide fire extinguishers in all newly manufactured non-AC coaches as well. Provision in existing coaches is also being carried out by Zonal Railways.

Provision of Double Acting doors in coaches

- Double Acting door in coaches are two way swing AC compartment doors for easy evacuation of passengers in the event of fire. Sanction under the Rolling Stock Programme (RSP) exists for Double Acting doors in 6500 coaches, 3124 nos. of coaches fitted

Contd...

- Production Units advised to ensure that all newly manufactured AC coaches shall be provided with Double Acting doors

What may be the other probable source of Fire ?

- It is quite difficult to pin point the exact cause of fire in railway coaches due to extensive damages and only general observations are available.
- There are variety of reasons which may be a source of initialization of fire, some of them are discussed further

- Sabotage/Miscreants act
- Carrying Inflammable goods like stove, gas cylinder, kerosene oil, petrol, fireworks etc. in passenger coaches.
- Making fire/ using fire near paper, wood, petrol or such other inflammable articles.
- Throwing waste material out side the dust bin near door. Non-removal of garbage from pantry car/coaches
- Malpractices like carelessly thrown lighted match sticks, cigarette butts, Bidi butts etc.



- **Insertion of cigarette butts**, Bidi butts, Gutakha wrapper etc. in fan base, fuse distribution board, roof openings.
- **Electrical Equipment Failure** like short circuit, failure of some protection devices
- **Mishandling/ careless use of pantry equipment** by pantry car staff.
- **Leakages/ Blasts** of Pantry Gas Cylinders & LP gas lines
- **Careless storage** of inflammable materials like news papers, edible oil etc. in pantry cars.
- Panic has also been noticed to have been caused among the passengers due to **smoke emission due to brake binding/ hot axle**.



PREVENTIVE MEASURES FOR THESE ACTIVITIES

PANTRY CAR STAFF

1. Ensure that there are no gas leakages.
2. Ensure that specified number of gas outlets only to be used.
3. Gas cylinders are kept on proper rack including upper shelf duly clamped if any.
4. Gas regulator, flame arrester & pressure gauge are in working order.
5. Ensure that Gas manifold is available.
6. Ensure that Exhaust fans are working.
7. Ensure that All main doors are free to be opened

Contd..

8. Ensure that Passages are kept free for movement.
9. Ensure that Vestibule area, passage, pantry car & LPG chamber are kept cleaned.
10. Ensure that adequate numbers of fire extinguishers at nominated place and not overdue for refilling.
11. Don't Tamper with gas flexible pipes, regulators, flame arresters & clips on adopter.
12. Don't Use hot cases for storage of unwanted materials.
13. Don't permit extra persons to travel in pantry car.

TTE/GRP/ RPF PERSONNEL

- Interrupt passengers on malpractices like smoking, throwing ignited butts, lighted match sticks into the compartments.
- Operating heater/electric equipment except mobile/laptop or using extension boards through the mobile/ laptop charging points



CONTD...

- Some AC Coach attendants keep linen/bedding items in vestibules. Catering staff block vestibule area by keeping food trays etc. The vestibule area is most critical place for safe exits in case of fire.
- Ensure hammer is available near toilet for breaking window glasses in case of emergency. cover shall be of flap type for quick removal.



CONTD...

- Whether any passenger is carrying dangerous articles such as explosives including fireworks, inflammable materials like oil, grease, ghee, paint, dry grass, acids, LPG cylinders, Kerosene stoves, etc.
- Doorways area, corridors and vestibule area should be kept clear always for easy evacuation in emergency.
- Ensure regular cleaning and disposal of waste from dustbin by the On –Board Housekeeping Staff (OBHS).
- Stretcher and first-aid box should be in good condition and shall be checked periodically.

Other Measures to prevent Fire

- Vigilant policing
- Publicity campaigns
- Display of Helpline nos in coaches



ट्रेन में **ज्वलनशील** सामग्री लेकर यात्रा करना **मना** है।

हम आपका सक्रिय सहयोग चाहते हैं।

रेल यात्रा के दौरान ज्वलनशील पदार्थों/वस्तुओं के होने की जानकारी मो.नं. 9794845955 पर दें तथा ट्रेन में उपस्थित TTE/RPF स्टॉफ/गार्ड को बताएं।

पूर्वोत्तर रेलवे

आपकी सुरक्षा, हमारा धर्म—
सबसे बड़ा जवाबदारी है।



हम आपकी रेल यात्रा को और अधिक सुरक्षित बनाने के लिए आपका सक्रिय सहयोग चाहते हैं।

ट्रेन में यदि कोई सिगरेट/बीड़ी पीता दिखाई दे अथवा ज्वलनशील विस्फोटक पदार्थ का परिवहन करता दिखाई दे तो टेलीफोन सं 0551-2202964 पर सूचित करें अथवा मोबाइल सं 9794845955 पर कृपया SMS करें।

- Publicity campaigns to educate the people & staff
- Posters depicting the precautions to be taken to protect the fire
- Padlocking of Rakes in yard and platform



Sensitization and monitoring

- Regarding sensitizing passengers not to carry explosives & inflammables
- Ensuring two wheelers' fuel tank in empty condition by commercial staff



DOs AND DON'Ts

- Keep the fire extinguishers in clean condition. There should be no sharp bend in rubber pipe.



DOs AND DON'Ts

- Train on board staff shall be conversant with the emergency window positions in different type of coaches. It should be displayed properly. Passengers should also be counseled.



DOs AND DON'Ts

- Pantry staff should keep the pantry stove platform clean and no foreign material shall be left on it.



DOs AND DON'Ts

- Do not stack material in pantry car corridor it should be clear for easy movement in case of any emergency exit.



DOs AND DON'Ts

- Do not keep bed rolls, etc. in vestibules, for easy movement in case of any emergency exit. It can also be a source of fire if any lighted cigarette/ bidi, match stick etc. is thrown by passenger



DOs AND DON'Ts

- Do not throw waste material (polythene bags, wrappers, papers etc. near/out side the dust bin/ in vestibule. These materials may also be a source of fire if any lighted cigarette/ bidi, match stick etc. is thrown by passengers.



DOs AND DON'Ts

- Do not keep combustible material like poly bags, paper, edible oil etc. near electrical panel/switch board in pantry.



DOs AND DON'Ts

- Ensure the isolating cock of LPG line is in **OFF** condition when not in use in pantry car



DOs AND DON'Ts

- Display of proper stickers like

Paste stickers over FDB cover showing instructions not to insert waste material inside it.



Intensive publicity campaigns to prevent the traveling public from carrying inflammable goods to be undertaken regularly in addition to provision of stickers.

DOs AND DON'Ts

- Do not plug extra load/ loose wire on socket provided in pantry car or in mobile charging socket.



Precautions during Maintenance

- By cleaning & closing of various gaps opening on panels and electrical junction boxes in trip all schedules

rubbish



Point of
insertion



Provision of Fire-retatdant Cables

- Fire survival cables-Halogen free, fire retardant, low smoke e- beam irradiated cable during replacement



Provision of Fire/flame retardant Materials

- Fire worthiness of coaches by replacing more fire/flame Retardant materials during schedule maintenance



Pantry Car Equipments

- Proper upkeep of pantry by periodical Testing of LPG lines, burners, hot cases. Boilers etc- Contract is in place with Approved agency



FIRE FIGHTING ARRANGEMENT

– Guard-cum-Brake Van, AC coaches and Pantry Cars in all trains are provided with portable fire extinguishers to cater for emergencies due to fire accidents. The fire extinguishers provided in the coaches for electrical fire should be of DCP type as per following specifications.

- 1) DCP type fire extinguishers as per IS: 2171 of 1995.
(Portable fire extinguishers, dry powder cartridge type)
- 2) IS: 307-1977 for carbon dioxide
- 3) IS: 4947 - 1995 for gas cartridge for use in fire extinguishers
- 4) IS: 4308-1982 for dry powder for fire fighting

Portable Fire Extinguisher – Pantry , AC and Brake Van

- To cater for emergencies
- Provision as per the number prescribed

Type of Coach	Prescribed nos	Responsible Department
Air Conditioned	2	Electrical
Guard cum Brake Van	2	Mechanical
Pantry Car	4/8	Mechanical



Training on Fire Fighting

- To all on board staff like
 - Running staffs : LP,ALP and Guards
 - TTEs
 - AC Mechanic & Coach Attendants
 - OBHS staff – all staff trained-covered all staff
- Issuing competency certificate



Accidental preparedness for Fire in ARTs

- Water Buckets –
6 no in each
A & B type of ART
- DCP type Fire Extinguisher
6 no in each
A & B type of ART



Firefighting preparedness in ARTs

- Water mist & CAF (Compressed Air Foam) Fire Extinguisher back pack type high pressure – 2 in each ART



- Non sparking/sparking resistance/non magnetic/non corrosive/sparkless safety tools



Fire Fighting arrangement

- Portable fire extinguishers are in working order and are available at the nominated place
- Sufficient number of spares should be kept in stock to ensure prompt replacement of defective/missing extinguishers.
- Fire extinguishers shall be easily visible and accessible & in locked cupboards.



- FEs shall be painted red with clear operating instructions.
- The plate shall also carry a label for last checking, refilling date and due date.
- Staff should be familiar with location of FEs & their operation method



Helping by way of alarm & evacuation

- Proper working of passenger alarm chain, working of emergency window & hammer



INDICATION OF EMERGENCY EQUIPMENT

- Indication boards with essential instructions for equipment which can help in passengers to stop the train, exit from emergency windows etc. in any emergency shall be prominently displayed.



HOW TO OPEN EMERGENCY WINDOW

- *Emergency window is provided in 3rd coupe of every AC coach*
- **Step 1 : Pick any heavy article such as water bottle, shoe etc. and break the chain handle glass.**



Step 2 : Pick the chain handle and pull out the complete sealing rubber of the emergency window glass.



INSTANT ACTION TEAM AGAINST FIRE

- An instant action team comprising the following available on the train may be formed:
 - Loco pilot, Asst. loco pilot, Guard
 - All TTEs, AC Coach attendants, AC Mechanics
 - Pantry car staff (railway and / or contractor)
 - OBHS (On-board Housekeeping Staff)

- TXR staff (as provided on some trains)
- RPF/ GRP staff
- Railway employees either on duty or on leave as passengers traveling in the fire affected train
- Doctors traveling by the train
- Passengers traveling on the train who volunteer
- Railway staff working at site or available near the site of the fire incident

ROLE OF INSTANT ACTION TEAM

1. Don't panic.
2. Pull the Alarm Chain and stop the train immediately.
3. Evacuate the passengers to adjacent coaches through vestibules; if fire is not extinguished. after complete evacuation the rolling shutters of coaches on fire to be closed to contain the spread of fire.
4. More people expire due to suffocation from smoke rather than due to actual burning. Advise passengers to take a cloth, wet it in their drinking water and cover their nostrils. This reduces the smoke inhalation & subsequently its bad effects.

ROLE OF INSTANT ACTION TEAM

5. Insist that passengers should save themselves first and not to bother about their luggage which can be retrieved later on.
6. Isolate the affected coaches from other coaches by decoupling both Mechanical & Electric couplers.
7. Locate the fire extinguishing substances viz, fire extinguishers, water bucket with water/sand, etc. Use water from the coaches.
8. Try and put out the very source of the fire before it becomes a big blaze.
9. Turn off Electrical Appliances. In case of fire from electricity switch off the source.
10. Report it

ROLE OF INSTANT ACTION TEAM

11. When a person is on fire

1. Approach him holding the nearest available wrap in front of you.
2. Wrap it round him.
3. Lay him flat and smother the flames.
4. He may roll on the floor, smothering the flames.
5. On no account should he rush into the open air.
6. Call for assistance.

12. Handling of injured passengers

1. Building up confidence of injured passengers by suitable advice is of great importance.
2. First aid should be rendered to the injured passengers.
3. In serious case, remove the patient quickly to hospital as the injured may require an

ROLE OF AC COACH MAINTENANCE STAFF

- Immediately isolate the affected coach/coaches electrically.
- Use fire extinguisher to extinguish fire to the extent possible.
- Immediately check lights in the coaches and provide light in dark coaches.
- Provide light at accident site.
- Take necessary action as a man of common prudence will take not only to help the stranded passengers but also to arrange such helps as would be demanded by the circumstances.
- Help in extricating the trapped passengers/bodies.

ROLE OF CREW (LOCO PILOT/CO-PILOT, GUARD)

1. Stop the train immediately.
2. Arrange the stretcher and first-aid box for the injured passengers.
3. Arrange for isolating the affected coaches from other coaches by decoupling both Mechanical & Electric couplers.
4. Report it to the nearest station/control/fire station.
5. Provide anti rolling arrangement on the isolated coaches and train as well.
6. Render first aid to injured passengers, obtaining assistance of the railway staff, doctors and / or volunteers on the train, or near the site of accident; and transport the injured to the hospital by taking the help of Ambulance service, means available.

ROLE OF PANTRY CAR STAFF

1. Protect the inflammable available at pantry car.
2. Extinguish the fire by using fire extinguishers available at pantry.
3. Provide necessary assistance to TTE as directed.

ROLE OF ON BOARD HOUSEKEEPING STAFF & TXR

1. Open the doors of both sides of coaches.
2. Evacuate the passengers to the adjacent coaches which are away from the fire through the vestibules; if the fire is not extinguished. After complete evacuation the rolling shutters of coaches on fire to be closed to contain the spread of fire.
3. Open Emergency Windows for Evacuation of the passengers.
4. Provide necessary assistance to TTE as directed.

ROLE OF RPF/GRP

1. Separate the area of incident by establishing temporary barriers and ensure that the on lookers and spectators do not enter the affected area to disturb the scene or hamper the rescue operations.
2. Baggage of passengers should be isolated and protected and should be taken care of, till they are handed over to claimants or taken over by Railway authorities.
3. RPF personnel should respond to any call for assistance to rescue victims and transport them to the nearest hospital.
4. Check, save and record the evidences/clues of the fire.

SOME RECENT FIRE CASES

1. Fire in Coach no. 06493GS NE, third from TE of train 05389 KSJ-FBD passenger. No Causality, Main line Block. 26/12/2021 at 23:35 ,NER / IZN Divn / FBD-KSJ(B3)
 - Prima Facie Cause:No shortcomings in the electric equipment/fuses/panels have been found in the burnt coach which could have led to fire.The prime facie cause appears to be burning of garbage or throwing of burnt cigarettes/bidies by an unknown person/persons travelling in the coach most likely in between cabin 1 to 3 on the Farrukhabad end of the coach.However it is yet be decided after enquiry.

2. Fire in A1 & A2 Coach of Train no. 20848 UHP-DURG EXP at HET(HETAMPUR) station JHS DIVN/ NCR 26/11/21 15-00 Hrs(B3)

Prima Facie Cause:

By the available limited circumstantial evidence committee is of the opinion that fire probably may have started from dustbin of lavatory and since fan is provided behind the dustbin for ventilation which is always throwing fresh air to dustbin. May be due to inadvertent throwing of cigarette butt or match sticks, in the dustbin, it has become potential source of fire. Since, there was no onboard cleaning arrangement in train, the dustbin was filled with garbage or tissue paper.

In this case, there is possibility that the cigarette or match stick might have come in contact with papers or plastic wrappers etc. already lying in the dustbin and fire started. Moreover, due to continuous throwing of fresh air by fan provided behind the dustbin, the fire spread. Forensic team of Morena (MP) has collected the several available remains as evidences from the burnt coaches. Forensic report will be submitted in due course. The final conclusion of the source of fire will be ascertained only after getting the outcome of forensic report.

3. Train no-02004 NDLS-LKO shatabadi exp arrived GZB pf no-02 at-06:41 hrs on 20/03/21. Fire reported by on duty guard in rear luggage van no NR-LWLRRM- 199393 on GZB stn NR / DLI / CYZ-NDLS (B3)

CAUSE: This fire incident occurred due to spark in mobile batteries & gadgets which were in ON condition and availability of highly inflammable items i.e. sanitizers, cloth etc in the parcel van.

4. On 30.07.2020 train no DER/MDPT/Container caught fire in 13th wagon from train engine No. 62270947870 BLCB at 21.00 Hrs between Bhachau and Chirai stations at kms 770/06. WR/ ADI / SIOB-BHUJ (B2)

Prima facie cause : Fire erupted from Power pack (Diesel Generator). CONCOR is responsible to ensure all conditions of the contract, including imparting training of Attendants/escorting staff to follow correct procedure during carrying out trouble shooting/repairing work/ maintenance work/reporting or logging repairs in log-book etc. of DG Set. Exact reason can be ascertained after Enquiry.

5. Train 02017 NDLS-DDN Shatabdi Special with load of 16 coaches passed RWL station at 12.02 hrs on 13/03/21 NR / MB / DDN-LRJ (B3)

While approaching QSR station, it stopped due to pressure drop between Up distant and Home signals of QSR. Smoke was coming out and it was found that Coach No. NR 199400 CZAC, 8th from train engine has caught fire and burning badly. Guard along with ALP and other on board staff tried to seize fire with help of many fire extinguishers but it failed. No casualties, injuries are reported. However, Guard, LP, ALP and On board staff on the train done exceptional well in taking passengers to safe distance, detaching the coach and keep it at safe distance and this way avoiding any casualty, injury to any passenger.

Prima Facie Cause: Fire has been ignited through Bidi/Cigarette thrown by unknown passenger on waste paper/polythene in the Dustbin in Haridwar end left side toilet in coach

RECENT IMPROVEMENTS SUGGESTED

- 1.Dustbins should be metallic.
- 2.FRP modular toilet specification should be reviewed and made more stringent in line with international standards.
- 3Automatic Fire detection system should be installed in all the coaches on priority.
- 4.Location of exhaust fan provided near the Dustbin to be reviewed.
- 5.Relocation of the CCTV box containing the Hard Disk.
- 6.Fire Extinguishers may be made more effective.

7. Quality of furnishing material should be ensured by inspection agencies & PUs
8. Training of all escorting staff & coach attendant for operation of fire extinguishers and fire fighting.
9. No hanging or loose wire in the coach. No electrical protection/fuses should be bypassed.
10. Dustbins to be regularly cleaned.
11. Prominent display of “No Smoking” sign in the train and toilets.
12. HDLP sheets with higher fire retardancy properties may be used for paneling of LHB Non AC coaches.

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13.Fire and smoke detection system installed in lavatories to be reviewed so that smoking in toilets can be detected in trains.

14.Design of proper fire and smoke alarm system for Non-AC coaches should also be developed.

15Automatic braking valve should be retrofitted in coaches fitted with fire and smoke alarm system without it.

16.Aerosol base small F. E. can be fitted in electrical panel

Lastly

All round awareness, education and public support is required in planned way to ensure that fire prone materials are not taken & antisocial elements & negligent passengers/persons are not able to create fire hazards.

Thank you