

अध्याय – 15 आग और अन्य दुर्घटनाएं

(Chapter – 15) FIRE AND OTHER ACCIDENTS

Fire on a running train is more catastrophic than on a stationary one, since fanning by winds helps spread the fire to other coaches. Moreover, passengers sometime jump out of a running train on fire resulting in increased casualties.

In case of fire in running train, every railway staff available on the train or at the site shall immediately try and stop the train and plunge into action to save lives and property.

(A) FOLLOWING SOURCES ARE MAIN CAUSES OF FIRE IN TRAINS :

- (i) Carrying stoves, sigris, gas cylinders, kerosene oil, petrol, fire works etc. in passenger compartments.
- (ii) Making fire/using fire near paper, wood, petrol or such other inflammable articles.
- (iii) Lighted match sticks, cigarette ends carelessly thrown.
- (iv) Short circuit in electrical wirings.
- (v) Using naked light during authority token delivery to the driver, shunting of inflammable loads, sealing of inflammable wagons.
- (vi) Use of open fire, smoking near gas/ petrol tank.

All railway staff and passengers should take all possible precautions to avoid any of the above mistakes so that possibility of fire breaking out can be minimized. In general fire originates in a small level. When it is surrounded by burning materials with adequate supply of air, fire spreads.

(B) ACTION TO BE TAKEN IN CASE OF FIRE IN TRAIN :

- (i) First and foremost immediately summon the fire brigade.
- (ii) Secondly, if you smell gas or vapour, or even in case of excessive smoke, hold a wet cloth loosely over your nose & mouth and breath through it in as normal a manner as possible.

1. In case of fire in a passenger train :

- (i) In case of fire pull the Alarm Chain and stop the train immediately.
- (ii) Try and put out the fire before it becomes a big blaze by using either water or blankets etc.
- (iii) More people expire due to suffocation from smoke rather than due to actual burning.
- (iv) Advise passengers to take a cloth, wet it in their drinking water and cover their nostrils.
- (v) Instruct passengers to go to the other end of the coach which is away from the fire and if possible cross over to the next coach through the vestibule.
- (vi) Insist that passengers should save themselves first and not to bother about their luggage which can be retrieved later on.
- (vii) Make sure that no passenger lies down on the floor.
- (viii) After train has stopped, passengers should come down from the coach immediately.
- (ix) Building up confidence of injured passengers by suitable advice is of great importance.

2. In the event of a vehicle on a train being on fire :

- (i) Stop the train immediately.
- (ii) Don't panic.
- (iii) Evacuate passengers from burning coaches.
- (iv) Protect property, valuables & mails.
- (v) Locate fire extinguishing substances viz, water bucket with water/sand, fire extinguishers etc;
- (vi) Use fire extinguisher if any and put out the fire.

- (vii) Use water from the coaches and extinguish the fire.
- (viii) Throw Earth or sand, if available, on the fire.
- (ix) Ascertain the type of fire viz, dry, oil gaseous, electric and use the right type of extinguishers;
- (x) Isolate the burning vehicle from other vehicle by uncoupling.
- (xi) Train to be protected by Driver and Guard at both ends according to the provision of G&SR 6.03.
- (xii) Report it to the nearest station/control/fire station.
- (xiii) Every effort shall be made to extinguish the fire and to save the wagon labels, seals and contents of the vehicle.
- (xiv) In case fire is discovered when the train is near a tank or watering station, the Guard and Driver shall use their discretion to proceed there, but no such attempt shall be made until the portion of the train in rear of burning vehicle has been detached.
- (xv) Inform all concerned to assist in extinguishing the fire.
- (xvi) In case of fire from electrical short circuit switch off the source.

3. In the event of fire on an Electric engine

- (i) Driver shall immediately switch off the circuit and lower the pantograph. The train shall then be brought to a stop at once.
- (ii) After disconnecting the electric supply to affected circuits, Driver shall take necessary action to put out the fire.
- (iii) If fire cannot be extinguished by the above means Driver shall advise TPC through emergency telephone to arrange for OHE of the affected section to be switched off.
- (iv) The Guard and any other staff available shall render all possible assistance to the Driver in putting out the fire.
- (v) Ordinary fire extinguishers or water from a hose pipe shall on no account be used to extinguish fire on live wire or electrical equipment.
- (vi) If services of fire brigade are required, fire brigade shall not be allowed to commence operation until all electrical equipment in the vicinity of the fire have been made dead.

4. In the event of a fire on a Diesel Engine:

- (i) The Driver shall immediately switch off the circuit breaker and shut down the engine. The train shall be brought to stop at once.
- (ii) The Guard shall give all possible assistance to the Driver in putting out the fire.
- (iii) Fire extinguishers of approved type shall be provided on each diesel locomotive when these are turned out from the home shed. The Foreman/CWS in charge of the shed shall inspect the fire extinguishers and ensure that these are in good working condition.

5. When a person is on fire :

- (i) Approach him holding the nearest available wrap in front of you.
- (ii) Wrap it round him.
- (iii) Lay him flat and smother the flames.
- (iv) He may roll on the floor, smothering the flames.
- (v) On no account should he rush out in the open air.
- (vi) Call for assistance.

6. Fire caused by Petrol or other inflammable liquids, acids or gases :

- (i) Segregate the affected wagon, coach or area involved.
- (ii) On opening a wagon do not enter it immediately. You would thus, avoid fumes, which may be dangerous.
- (iii) Use foam type fire extinguishers and sand and not water or soda acid type fire extinguishers.
- (iv) Do not bring naked lights near the site of fire.
- (v) Warn the people living in the surrounding areas within one Km. radius.
- (vi) Stay away from ends of tanks, as tanks normally burst from the ends.
- (vii) Cool tanks that are exposed to flames with water from the sides only after the fire is put out.

- (viii) Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire.
- (ix) Inform the nearest Fire Stations intimating that the fire has been caused by Petrol or any other inflammable liquids, acids or gases.

7. In case of fire due to Explosives/Inflammables/Dangerous Goods :

- (i) Extinguish by closing the valve or isolating LPG feed to fire by other suitable controls.
- (ii) Following steps may be taken if no undue risk is involved:
 - (a) Move unheated cylinders to a safe place after ensuring closing of valves.
 - (b) Cool the hot cylinders by spraying water from a safe position. The person directing the spray should take up a position where he would be protected from possible explosion.
- (iii) If cylinder containing inflammable/toxic gas develops leak during transportation, remove it to an isolated open place away from any source of ignition and advise the filler or consigner as required.
- (iv) Inform the Chief Controller of Explosives by fax/telephone.
- (v) Inform officer in charge of nearest police station.
- (vi) Inform departmental officers concerned.
- (vii) Pending the visit of the Chief Controller of Explosives/his representative, the wreckage and debris shall be left undisturbed except to save lives.
- (viii) After getting information from the Chief Controller of Explosives that he does not wish any further investigation, the restoration work may be commenced.

(A) FIRE FIGHTING :

1. Dry chemical powder type fire extinguisher (DCP) :

These types are suitable for tackling petroleum, gas, electrical fire and controlling fires of textile fibers. Sodium based chemical powder is used on a fire which undergo chemical reaction.

2. How To Use :

- (i) Carry to the place of fire and keep it up right.
- (ii) Remove the safety clip.
- (iii) Strike the knob located in the cap.
- (iv) Sealing disk of the cartridge gets broken and allows carbon dioxide gas to escape to the main shell and powder is pushed out.
- (v) Direct the steam of the powder at the base of the flame.
- (vi) For effective result stand at about 1.5 to 2.5 m. near the seat of the fire.
- (vii) Move forward with moving the nozzle rapidly from side to side in sweeping motion.
- (viii) When using on outdoor fires operate from the up wind side for effective spray.

3. Building Evacuation : When the building fire alarm sounds :

- (i) Immediately evacuate using building emergency plan procedures.
- (ii) Walk to nearest exit/stairwell (close doors behind you)
- (iii) Do not use elevators.
- (iv) Proceed to the designated gathering area outside the building
- (v) Do not re-enter building until cleared by authorized personnel.
- (vi) Assist with evacuation of individuals with special needs.

4. Suspicious substance in Railway premises :

- (i) Clear and isolate the contaminated area. Do not touch or disturb anything.
- (ii) Call police/fire service/bomb squad.
- (iii) Wash your hands with soap and water.
- (iv) Identify individuals who may have been exposed to the material
- (v) Do not leave premises until disposed by authorities.

5. **Bomb threat/Blast** :Person receiving call regarding bomb threat should :
- (i) Attempt to gain as much information as possible from the caller like type of device, time set, location, reason/purpose of the act, dialect mannerism and identity of the caller.
 - (ii) Inform and alert the disaster management team (Bomb detection squad).
 - (iii) Alert police, fire brigade and explosive department.
 - (iv) Pass on the information to all departments concerned.
 - (v) Take initiative for evacuation of all persons from premises.
 - (vi) Person noticing a bomb like object, should bring it to the notice of the nearest available officer.
 - (vii) Inform GRP, RPF, Bomb detection squad.
 - (viii) Ensure all persons are away from the spot and avoid unnecessary crowding near the area.
 - (ix) Inform control to take further steps for regulating train services.
 - (x) Wait for clearance from the Police department to restore normal working.
 - (xi) Utilize "Caller ID" facility if provided to trace the caller.
6. **Radiation Emergency** :
- (a) Personal injury involving Radioactive material contamination :**
- (i) Render first aid immediately for serious injuries, as trained.
 - (ii) Call bomb squad, fire station.
 - (iii) If possible, without causing harm to the victim, monitor the injured, remove contaminated clothing and gross personal contamination.
- (b) Radioactive contamination of personnel :**
- (i) Remove and bag all contaminated clothing.
 - (ii) Call fire station, bomb squad, police
 - (iii) Skin contamination should be cleaned using mild soap and tepid water. Use portable survey meter to monitor for remaining contamination. If not free of contamination, re-wash and re-survey.
7. **What to do upon receipt of suspicious letter/package** :
- (i) Handle with care.
 - (ii) Don't shake or bump.
 - (iii) Isolate and look for indicators.
 - (iv) Don't open, smell, or taste.
 - (v) Treat it as suspect.
 - (vi) Call Police/Fire service/Bomb squad.
8. **If parcel is Open and/or Threat is identified** :
- (a) For a Bomb :**
- (i) Evacuate immediately
 - (ii) Call police/fire service/ Bomb squad.
- (b) For Radiological :**
- (i) Limit exposure – don't handle
 - (ii) Evacuate area
 - (iii) Shield yourself from the object.
 - (iv) Call police/fire service/bomb squad.
- (c) For Biological or Chemical :**
- (i) Isolate – don't handle
 - (ii) Call police/fire service/bomb squad.
 - (iii) Wash your hands with soap and water.

(B) OTHER ACCIDENTS :

1. Tampering of Railway fittings causing accidents & Placing of foreign particles on track to cause disruption to traffic :

- (i) A staunch vigil should be kept by introduction of special patrolling over the area as and when warranted.
- (ii) Some persons to be trained specially and to be drafted for duty over the area if required.

2. Earthquake :

- (i) When first tremors are sensed during an Earthquake, all personnel should evacuate buildings and assemble at safe places away from structures, walls and falling objects.
- (ii) Emergency shutdown should be declared.
- (iii) Emergency response plan to be activated.
- (iv) After status is restored, personnel should inspect all facilities for damage assessment, cleanup, restoration and recovery.

3. Landslide :

- (i) Whenever landslide is expected/experienced due to heavy down pour all train services should be regulated.
- (ii) Rescue team to be rushed for restoration work.

4. Floods :

Based on the weather forecast warnings regarding impending flood condition, following steps should be taken.

- (i) Bridge watchman to be provided at vulnerable points to inform flow of water.
- (ii) Shifting all personnel and movable equipment around the bank.
- (iii) If time permits sandbag dykes can be constructed to ensure safe passage of trains.
- (iv) Regulate train service till flood recedes
- (v) Evacuate people on train/at station and move them to a safer place.
- (vi) Contact Fire brigade, Naval, Army, Air force, Local boat man and arrange divers and boats.
- (vii) With the co-ordination of local authorities the Engineering officer/supervisor or other supervisors at that station shall arrange temporary shelter in nearby schools, marriage hall, community center etc.
- (viii) If necessary, arrange coaches to accommodate the affected temporarily.
- (ix) Seek assistance from voluntary organization and arrange drinking water, food, medicines etc.
- (x) RPF and GRP in co-ordination with local police shall arrange protection.
- (xi) Keep communication with Divisional Control Office.
- (xii) When people are marooned by flood, arrange air dropping of food packets, cloths etc., with the assistance of civil administration.

(xiii) Contact SJAB, local doctors and provide medical care to the affected.

(xiv) Take all necessary action to provide shelter and other assistance to those affected by floods.

5. Cyclone/Storm :

When a train is caught in a cyclonic storm at mid section/station :

- (i) Stop the train clear of cuttings, bridges and embankments.
- (ii) Guard, Driver and other Railway staff on train shall open all doors and windows of all coaches.
- (iii) Station Master shall not start trains when the wind velocity exceeds the permitted level.
- (iv) Make announcement frequently to warn the public about the storm/cyclone.
- (v) Take all necessary action to provide shelter and other assistance to those affected by cyclone and storm.