

Government of India  
Ministry of Railways  
(Railway Board)

No.98/Safety(A&R)/19/16

New Delhi, dt 1.11.2010

Chief Operations Manager,  
Central Railway,  
Chhatrapati Shivaji Terminus,  
Mumbai

**Sub: Train Operation during Fog – Precautions.**

- Ref: (i) Your letter No. TR/G&SR/Genl/102 dated 30.09.2010.  
(ii) Board's letter of even number dated 23.08.2010 and 25.08.2010.

The instructions on the subject matter had earlier been issued to Zonal Railways from time to time. Some of the Zonal Railways did not fully comply with these instructions on the grounds of distinct conditions prevailing on their system. Since crews work across boundaries of various Divisions/Zones, it is essential that the precautions to be observed in train operations during fog have the uniformity on all Zonal Railways. This aspect has been discussed in detail and after prolonged deliberations, instructions contained in Board's letter dated 23.08.2010 were issued with the approval of Board (ML, MM and MT/CRB).

Further, based on your letter under reference at (i) above, this has again been examined. Board (MT/CRB) has directed that the instructions contained in Board's letter dated 23.08.2010 are required to be strictly implemented by the Zonal Railways. It has been further directed that the Zonal Railways should evolve and organize an effective monitoring system. The proposed changes should also be taught to concerned staff while undergoing initial/promotional/refreshers course at Zonal Railway Training Institutes.

The logic behind the proposed changes vis-à-vis the points raised in your letter is explained in the **Annexure-A** to this letter. In this connection, all Zonal Railways including Central Railway are being advised separately to adhere to the existing instructions strictly as mentioned above.

Central Railways may, therefore, comply with the instructions contained in Board's letter dated 23.08.2010 in its true spirit as directed above.

DA: As above.

हस्ताक्षर जारी की  
दीपचन्द  
4-11-10

महानगर
Ministry of Railways
राज्य सरकार
Railway Board
अनुमति जारी
Issue of Enclosure
हस्ताक्षर
Signature
जारी की तिथि
Date of Issue

(Sunil Kumar)  
Adviser/Safety  
Railway Board

**Annexure-A to letter No 98/Safety(A&R)/19/16 dated .11.2010.**

**Item G(i)** The fog signal post is to be erected at 270 metres from the first stop signal. No fog signal posts are to be provided at stations with Double Distant signals and at stations which do not qualify for placement of detonators.

**Remarks of the Railway:** As per SR 3.61(d) the fog signal post is to be erected at 275 metres from the outermost signal. In case of double distant territory it will be placed 275 metres outside the inner distant signal.

- 1.. **Erection of fog signal post at 270 metres from the first stop signal:** In foggy weather where visibility is restricted, there is chance of overlooking the distant signal, thereby the Loco pilot will get warning only after detonating the detonator 270metres before the first stop signal i.e. Home signal. There will be very short span of distance for Loco pilot to control the train i.e. Loco pilot has only sighting distance and braking distance is not available, which will increase the possibility of passing stop signal at danger causing a safety hazard.
2. **In double distant territory the erection of fog signal post is to be dispensed with:** If the erection of fog signal post is dispensed with in double distant territory, Loco Pilot can not ascertain whether he has passed Distant or Inner Distant signal due to restricted visibility in foggy weather. By placing detonators 275 metres short of inner distant signal, Loco Pilot is pre-warned to observe the aspect of inner distant signal and approaching station.

**Board's view:** GR 3.61(i) - Placing of Detonators in thick, foggy or tempestuous weather impairing visibility:- prescribes that "In thick, foggy or tempestuous weather impairing visibility whenever it is necessary to indicate to the Loco Pilot of an approaching train the locality of a signal, two detonators shall be placed on the line by a railway servant appointed by the Station Master in this behalf, about 10 metres apart and at least 270 metres outside the signal or signals concerned."

The above mentioned GR prescribes that the fog signal posts shall be erected at least 270 metres outside the signal concerned. In order to achieve uniformity of instructions over IR, this distance has now been uniformly laid down as 270 metres.

GR does not prescribe whether the detonators shall be placed outside the Distant signal or Home signal. During foggy weather, the maximum speed of a train is 60 kmph but the Loco Pilot is required to run at a speed at which he can control the train depending on brake power, load of the train, visibility, etc. The Loco Pilot shall counter signal warning board in case of single distant signal and two distant signals in case of double distant territories. This is considered as sufficient warning to the Loco pilot. Thus the detonators are required to be placed 270 metres short of the first stop signal i.e. Home only. Further, in double distant territories adequate pre-warning is available. Therefore, there is no need to place detonators or to erect fog signal post in double distant territories to save on infructuous deployment of staff, which is scarce in any case.

**Item G(ii)** The Subsidiary Rules of all Zonal Railways presently provided that the fog signalman not be on duty for more than 3 hrs. at a stretch. This provision is to be deleted.

**Remarks of the Railway:** Provision of SR 3.61-1(i) is necessary as the fog signalman is deputed at remote location without shelter with limited stock of detonators i.e. 20 in two tin cases. Sustained attention in performing duty will not be maintained if allowed to work continuously.

**Board's View:** As per instructions dated 23.08.2010, the detonators are to be placed 270 metres outside the First Stop Signal. Now the Fog signalman shall be deputed at a location nearer to the station. He may come to station to collect detonators when there is no train. Further, due to shortage of staff in traffic as well as engineering departments, it is difficult to arrange Fog signalman. To make the rule practicable the provision of Fog signalman on duty for not more than 3 hrs. has been deleted.

**Item G(iii)** The Subsidiary Rules of all zonal railway presently provided that the Fog Signalmen shall see that approach signal taken 'Off' are put back to 'On' after passage of the train, otherwise inform the cabin Man/SM.

**Remarks of the Railway:** It is an important safety measures to ensure that taken 'Off' signal is put back to 'On' position after passage of the train especially during foggy weather. There is likelihood of failure of semaphore signals in 'Off' position which can be curbed to avoid any unusual occurrence as Fog signal man personally inform to SM for such failure. Such extra precautions are necessary in view of train operation in restricted visibility i.e. in foggy weather.

**Board's view:** During foggy weather the aspect of signal may not be visible to the fog signalman from a distance of from 270 metres and now-a-days in colour light signalling territories, the aspects of signals are being repeated on Panel/RRI/Cabins. Therefore, there is no need to prescribe the duty of the Fog signalman to observe the signal aspects. This will make the situation / rule more practical.

**Item G(iv)** The subsidiary Rules of Zonal Railways presently provide that working of IBSs shall be suspended. This provision be deleted.

**Remarks of the Railway:**

- (a) At station, during the foggy weather fog signalman is being deputed to warn the Loco Pilot of approaching train about the location of approach signal whereas in case of IBS, Loco Pilots are not being pre warned and there is likelihood of passing the signal at danger.
- (b) If the IBS is passed by the Loco Pilot at ON position due to non communication with SM of the station in rear, he may start the train with restricted speed of 15/8 kmph. There is a possibility of rear end collision

with the train ahead due to impaired visibility as the train ahead had also observed the same condition while passing the IBS.

**Board's view:** The instructions, issued vide Board's letters of even number dated 17.12.1998 and 21/23.12.1998 and later superceded by letter dated 14.01.2000, are relevant for the instant issue. None of these letters contain the provision for suspension of IBS during foggy weather. In these instructions it was stipulated that **IBHs (and not IBSs) may be closed during the period of fog, that too in semaphore signaling territories only.** These instructions were finally amended under Board's letter dated 07.12.2009 vide these instructions, the provision of suspension of even IBH during fog was deleted. This provision is also not mentioned in the proposed draft General Rules submitted by the GRRC. Thus, provision of suspension of IBS during fog was never mandated by Board.

It would be, prudent to have uniformity of Rules/Instructions and working procedures especially as the crews work beyond the boundary of Divisions/Zones.

**Item G(vii)** Erection of fog signal post at 270 metres outside the first stop signal:

**Remarks of the Railway:** Already commented in item G(i).

**Board's view:** Already commented in item G(i).

**Item G(viii)** 'B' class station (Semaphore) signal to be treated as 'A' class for the purpose of granting line clear. This should be deleted.

**Remarks of the Railway:** The Provision of treating 'B' class station as 'A' class station for the purpose of granting line clear in case of thick and foggy or tempestuous weather impairing visibility is made to provide more safety margin in case the LP overshoots the Home signal; the train will come up vacant line only and will avert the disaster.

**Board's view:** As it is mandatory to warn the Loco Pilot of an approaching train by placing detonators 270 metres short of First Stop signal at 'B' class station provided with semaphore signals, there is no need to treat such 'B' class stations as 'A' class.

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