

Innovative idea on: Easy detection of Rail/weld fracture by Cold weather night patrolmen.

Name of Innovation: Rail/Weld fracture detection device developed by Adra Division of S.E.Railway.

Summary: A Rail/weld fracture detection device has been developed for easy accurate and faster detection of all types fractures during night time by cold weather night patrolmen.

Detailed Description: Rail/Weld fracture detection device is a very simple light weight gadget and easy to operate by Cold weather patrolmen deployed at night. It is supported on double flanged PVC roller with axle. As PVC itself a non-conducting material so It has no adverse effect on Signalling of Track Circuited area. A stainless steel wire loop specially designed and fitted by drilling Co-axial hole at both ends of axle and the ends of wire loop is simply inserted in holes of axle. It can easily be taken out when not in use. This wire has also no adverse effect on Signalling of Track Circuiting area because thickness of wire is kept as 2.15 mm which is less than the thickness of end post of glued joint. During operation the wire loop moves with the PVC roller by touching the top table of Rail. If there is a gap due to fracture the wire loop will easily insert in gap and it will not allow the operator (Patrolman) to move further. Hence any fracture will be detected easily. It is equipped with powerful LED based lighting arrangement therefore ceases the purpose of carrying extra torch(Except Tri-colour torch) and wearing head light mounted Helmet by patrolman during night patrolling which is heavier and painful to wear for a long time.

Brief Data of the Device:

1. One PVC double flanged roller.
2. One Stainless Steel pipe handle.
3. One Stainless steel axle.
4. One Stainless steel fork.
5. One LED based rechargeable light with fixing arrangement.
6. Specially designed stainless steel wire loop.
7. Total weight 1.87 Kg.
8. Date of use in track on 29th January'2018.
9. Cost- Rs. 1500/- each.

Impact: With the help of this Rail/weld failure equipment, no fracture will remain undetected. Also lighting arrangement attached to the stick will remove the use of torch and headlight mounted helmet hence, it will ease the working of patrolman during patrolling.



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