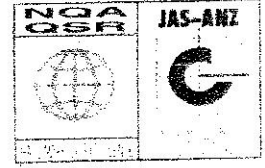


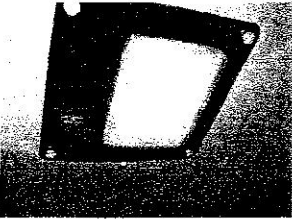
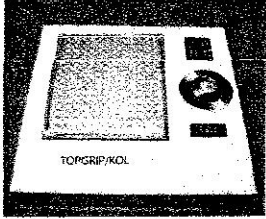
भारतीय रेल (रेल मंत्रालय)
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DESIGN BULLETIN

1.	Design bulletin no. :	DB/03/2013/03	dt.23/03/2013
2.	Subject :	Use of LED based cab light with spot light in place of lamp/CFL type cab light in HHP locomotive and ALCO locomotive.	
3.	Background :	1) DLW team has visited Gooty shed on 27/07/12 regarding observation / study on modification/suggestion reported by Gooty shed in HHP loco, Gooty shed has advised that the fusing of cab light bulb & defect in holder problem is solved by replacing the LED type cab light. 2) As per Diesel Mitra report, surveyed by Sri R.A. Gupta, Dy.CMgM-I at Gooty Diesel shed use of LED based cab light for better reliability (for improving life) is fruitful.	
4.	Objective :	High reliability of multiple LED configurations for light beam compression to two CFL lamps added with advantage of low heat generation in close cavity, which cause failure of electronic as being experienced in case of existing CFL cab lights having electronic chock.	
5.	Details of study/ Investigation :	(1) During visit of DLW team at SCR/Gooty shed it was noticed that they have provided LED type cab light in one loco no. WDG4 12609. (2) It is observed that:- a) High life expectancy of LED cab light w.r.f. existing CFL cab light with electronic choke (50,000 Hrs LED working life w.r.f. CFL lamp working life 3000 Hrs.). b) Less space requirement providing flush mainly in cab & giving benefit of better aesthetics & high head space for crew. c) Introduction of spot light along with cab light to facilities crew's night working with	

		<p>caution memo light –on , which is much desirable as per safety requirement.</p> <p>d) High energy efficiency i.e. less power consumption (4-5 watt only w.r.f. to existing requirements 18-20 watt). Introduction of energy efficient cab light.</p>
6.	Corrective action :	<p>Hence it is decided to use the LED Cab light with spot light in place of existing cab light</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Existing</p> </div> <div style="text-align: center;">  <p>Proposed</p> </div> </div>
7.	Drg/Spec/Test plan/QP modified :	<p>Part No./Drg. No.: 18361353 Spec.no.: WDG4/EL/PS/36 dt. 16/03/13</p>
8.	Implementation :	<p>20 loco sets LED based cab light P.O. for cab lights has been placed on M/s. Krishna Engineering Works/Kolkata. Firm has supplied 20 loco sets LED based cab Light to DLW, Out of which 01 set has been fitted in loco no. WDP4B locomotive no.40078 and balance qty. are under process for fitment.</p>
9.	Circulation :	<p>CME/P, CQAM, DY.CME/Loco, Dy.CME/Engine, SQAM, WM/Engine, WM/LAS, WM/Test, SSE/TAS, SSE/LTS, SSE/EL/Insp., SSE/TAS/Progress.</p>


 22/3/13
 Dy. Chief Design Engineer/TC