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सत्यमेव जयते

भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226011
Government of India - Ministry of Railways
Research, Designs & Standards Organization,
LUCKNOW - 226011

No. EL/4.2.15 Dated 05.02.2014

**Chief Electrical Engineer,**

1. Central Railway, Mumbai CST-400 001.
2. Northern Railway, Baroda House , New Delhi-110 001.
3. North Central Railway, Allahabad- 211001.
4. Eastern Railway, Fairlie Place, Kolkata -700 001.
5. East Central Railway, Hazipur-844101.
6. East Coast Railway, Chandrashekharpur, Bhubaneshwar-751016.
7. Southern Railway, Park Town, Chennai-600 003.
8. South Central Railway, Secunderabad-500 371.
9. South Eastern Railway, Garden Reach, Kolkata -700 043.
10. South East Central Railway, Bilaspur-495004
11. Western Railway, Church gate , Mumbai-400 020.
12. West Central Railway, Jabalpur-482 001.
13. Chittaranjan locomotive works, Chittaranjan, West Bengal 713 331.

**MODIFICATION SHEET NO. RDSO/2014/EL/MS/0431 Rev '0'**
**Dated: 05.02.2014**

**1.0 Title:**

Modification in loco control circuit for working of VEAD valve in trailing locomotive during multiple unit operation (MU) for 25 kV ac Electric Locomotive fitted with microprocessor based control and fault diagnostic system (MPCS ver-2)

**2.0 Object:**

In conventional ( relay controlled) locomotives, during MU operation, RGCP of leading locomotive controls auto-drain valve of trailing locomotive also as per loco control circuit no. CLW.3W.12000.026 sheet no. 10A of 21 whereas in MPCS fitted locomotives, there is no such control from leading locomotive.

The objective of this modification is to ensure control of VEAD valve in trailing locomotive from the RGCP of the leading locomotive by extending the power supply through wires of MU coupler.

**3.0 Existing arrangement with cross references of respective design document:**

In MPCS locomotive Control circuit no. CLW.3W.15000.004 sheet no. 10 of 21, there is no extension of power supply for control of VEAD valve in the leading to locomotive to the VEAD valve of trailing locomotive. This means working of VEAD

valves in two locomotives in MU operation is independent ,i.e. there is no control of VEAD valve in the trailing locomotive from the RGCP of the leading locomotive. This results in accumulation of water in reservoirs of trailing locomotive.

SR advised to resolve this problem by adding a MU jumper for VEAD valve in MPCS ver-2 fitted locomotives.

**4.0 Modified arrangement to replace existing arrangement:**

One B-12 wire of MU coupler shall be connected to wire no. 116 for VEAD valve which is directly connected with RGCP pressure switch pin no. 3. as per Annexure A.

**4.1 Work to be carried out:**

Wiring shall be done layout as per enclosed circuit in Annexure A.

**5.0 Application to class of locomotives:**
WAG-7 & WAG5 class of 25 kV AC tap changer electric locomotives fitted with microprocessor based control and fault diagnostic system (MPCS).

**6.0 Material Required:**
Control cable of 2.5 $mm^2$ as per requirement.

**7.0 Material Rendered Surplus:** Nil

**8.0 Modification Drawings:**
Modified circuit given in Annexure-A

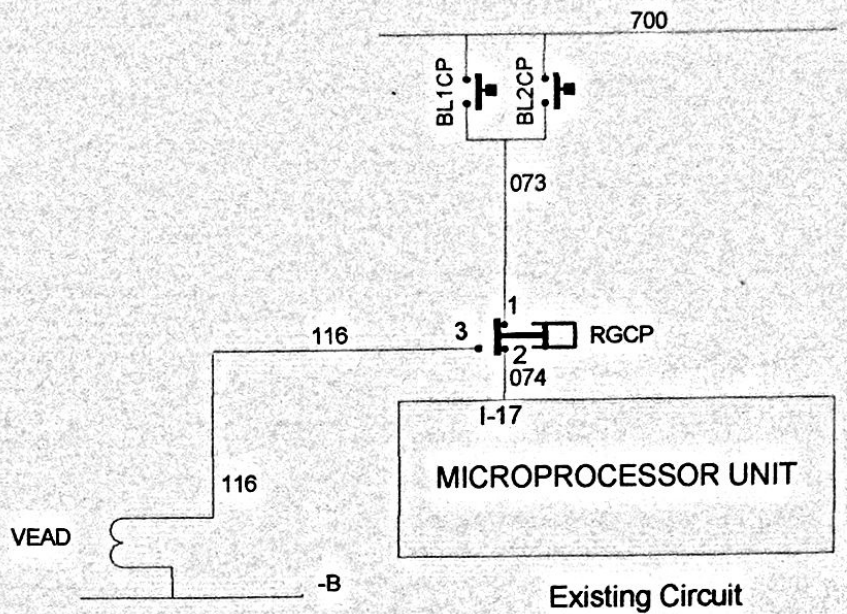
**9.0 Agency of Implementation:**
Electric loco sheds, MTR/POH workshops and CLW

05/2/14

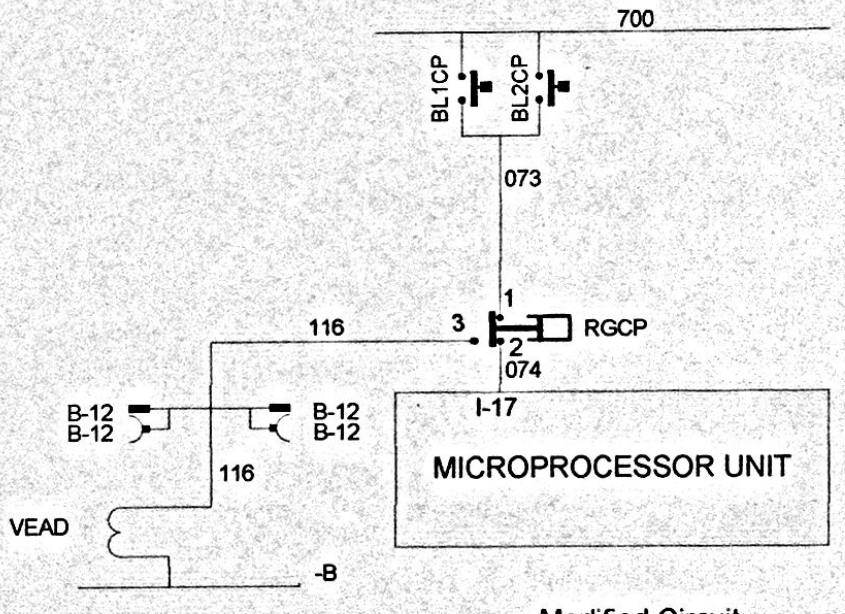
**(Ganesh)**
**for Director General/Elect.**

**Encl: As above**

Annexure-A




Existing Circuit




Modified Circuit