

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
RESEARCH DESIGNS & STANDARDS ORGANISATION
MANAK NAGAR, LUCKNOW - 226 011**

No.EL/3.1.3

Dated 27.05.98

MODIFICATION SHEET NO.RDSO/WAM4/207

1. TITLE :

Modification in the control circuit of EM Contractors.

2. Object :

- 2.1 In the existing control circuit of EM contractors in Electric Locomotives supply for Q 100 relay and EM contractors has been taken after the normally open auxiliary contact of DJ and time delayed normally closed auxiliary interlock of C118 contractor. While negotiating the neutral section, drivers normally switch `off` and switch `on` DJ without putting off the BLVMT, BLCP and BLPV switches. As normally open auxiliary interlock of DJ breaks heavy inductive circuit comprising of several EM coils there is a heavy flashover on the DJ auxiliary contact. Therefore regular cleaning of auxiliary contact of DJ is required during schedule maintenance. Also, whenever, there is a case of all auxiliaries not working either due to bad contact in the normally open auxiliary contact of DJ or in the time delayed normally closed contact of C118 contractor, it can not be attended by the driver in the normal course and locomotive has to be failed.
- 2.2 110 V control feed to the coils of C105 and C106 contractors have been given through normally open contact of QTD 105 and normally open contact of QTD 106 relays respectively. As reported by various Railways, there have been cases on line when due to some reasons or the other the normal open interlocks of QTD 105 and QTD 106 malfunctions resulting in heavy flashover at C105 and C106 contractors and some times burning of MVMT1 and MVMT2 due to single phasing.
- 2.3 The proposed modification attends both the above described problems.

3. Work to be carried out :

The existing control circuit of EM contractors is to be modified as shown in the Annexure-I. The details of cable index are given in Annexure-II.

4. Application to the class of locomotive:

All AC Electric Locomotives.

5. Material Required:

3 mm sq. control cable of required length.

6. Material rendered surplus:

None.

7. Reference:

Suggestions given by Electric Loco Shed, Bhusawal of Central Railway and South Eastern Railway.

8. Modification Drawing:

Annexure-I and II.

9. Agency of Implementation:

All Electric Loco Sheds, Works Shops and CLW.

10. Distribution:

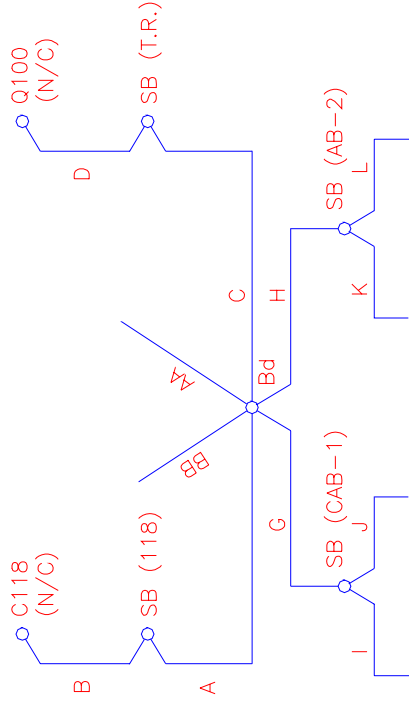
As per enclosed list.

Encl: As above

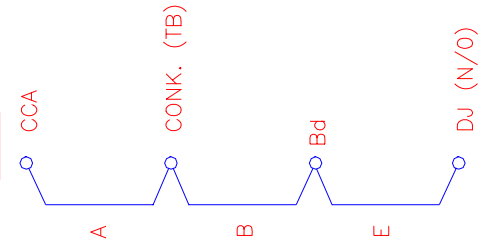


(O.H. Pande)
for Director General/Elect.

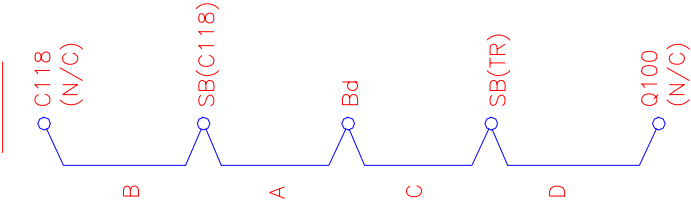
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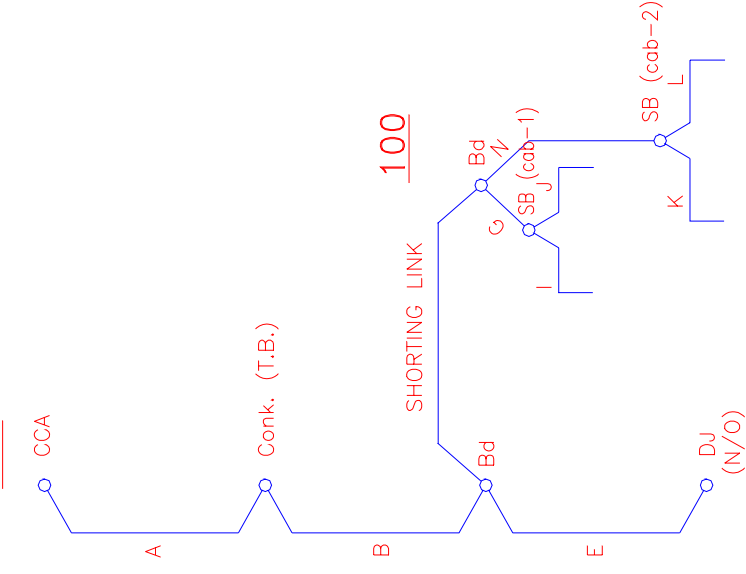
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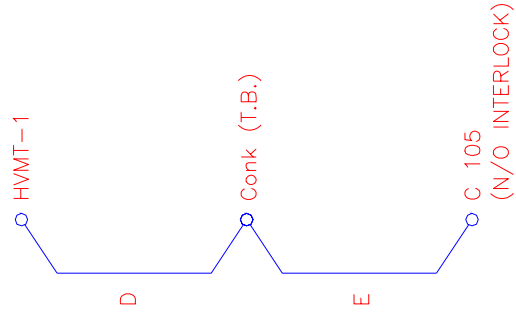
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SHORTING LINK

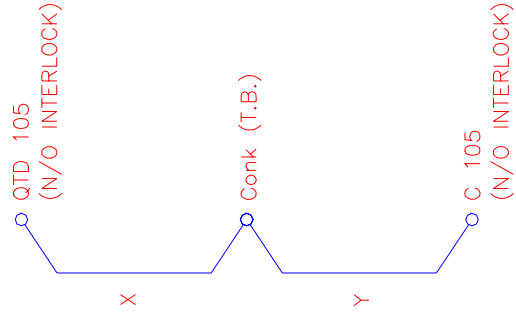
EXISTING CABLE CONNECTIONS

MODIFIED CABLE CONNECTIONS

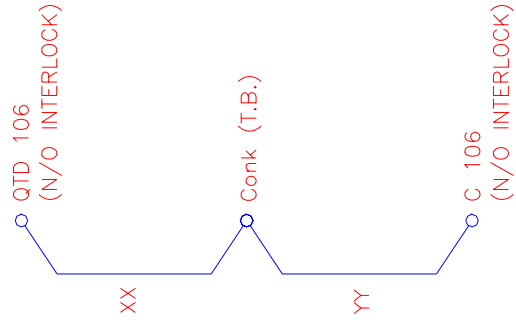
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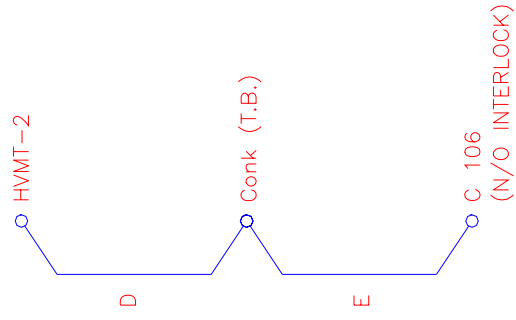
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NEW CABLE CONNECTIONS TO BE DONE

