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

EL/3.2.119

dated: 17.12.2007

**Chief Electrical Engineers:**

1. Central Railway, Mumbai, CST-400 001.
2. East Central Railway, Hazipur-844101.
3. East Coast Railway, Chandrashekharapur, Bhubaneswar-751016.
4. Eastern Railway, Fairlie Place, Calcutta-700001.
5. North Central Railway, Hastings Road, Allahabad- 211001.
6. Northern Railway, Baroda House, New Delhi-11 0001.
7. South Central Railway, Secunderabad-500 071.
8. South East Central Railway, Bilaspur-495004.
9. South Eastern Railway, Garden Reach, Calcutta-700 043.
10. Southern Railway, Park Town, Chennai-600 003.
11. West Central Railway, Jabalpur-482001.
12. Western Railway, Churchgate, Mumbai-400 020.
13. Chittaranjan Locomotive Works, Chittaranjan-713331.

**Modification sheet no: RDSO/2007/EL/MS/0351, Rev '0' Dated: Dec 2007**

**1. Title:**

Modified suspension Arrangement for Battery Box in WAP1/4 Locomotive

**2. Object:**

During the 31st MSG meeting held at Secunderabad on 25th and 26th Sep 2006. The problem of hanging of battery box due to failure of welding in WAP1/as was discussed. To avoid hanging of battery box on line, Electric loco shed, Kanpur and Electric loco shed, Baroda gave the suggestion for modification which have been examined. It is found that the proposal of CNB shed for provision of nut and bolt in addition to welding is more suitable and reliable. Accordingly this modification is being issue

**3. Work to be done.**

To strengthen the battery box support, Drill 12 mm diameter hole on long

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beam and on mounting bracket at the distance as shown in the drawing no: SKEL-4716 after removing battery boxes from loco underframe. Fix the bracket to the long beam by nut and bolt as shown in drawing, then weld the bracket to the loco beam properly. Four additional mounting bracket is to be provided in big battery box i.e. two in front and other two on the back side. Two additional angle bracket is to be provided in small battery box i.e. one in front and other on the back side.

Weld the bracket to the battery boxes as shown in the above drawing. Mount the battery box in position by providing nut and bolt as per drawing

4. **Material required:**

Mounting brackets and "L" bracket and Nut and bolt of M10X50 grade 8.8.

5. **Application to class of locomotives:**


WAP-1/4 class of locomotives

6. **Agency of Implementation:**

CLW, Electric loco sheds and POH work shops.

7. **Reference:**

RDSO drg. no. SKEL-4716

  
(M.K. Gupta)

for Director General/Electrical

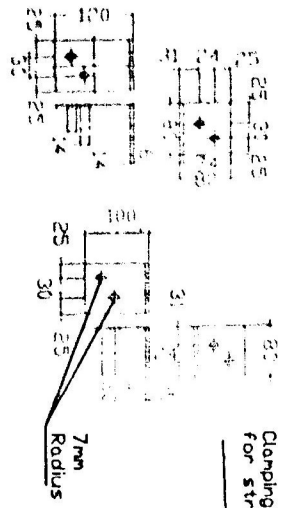
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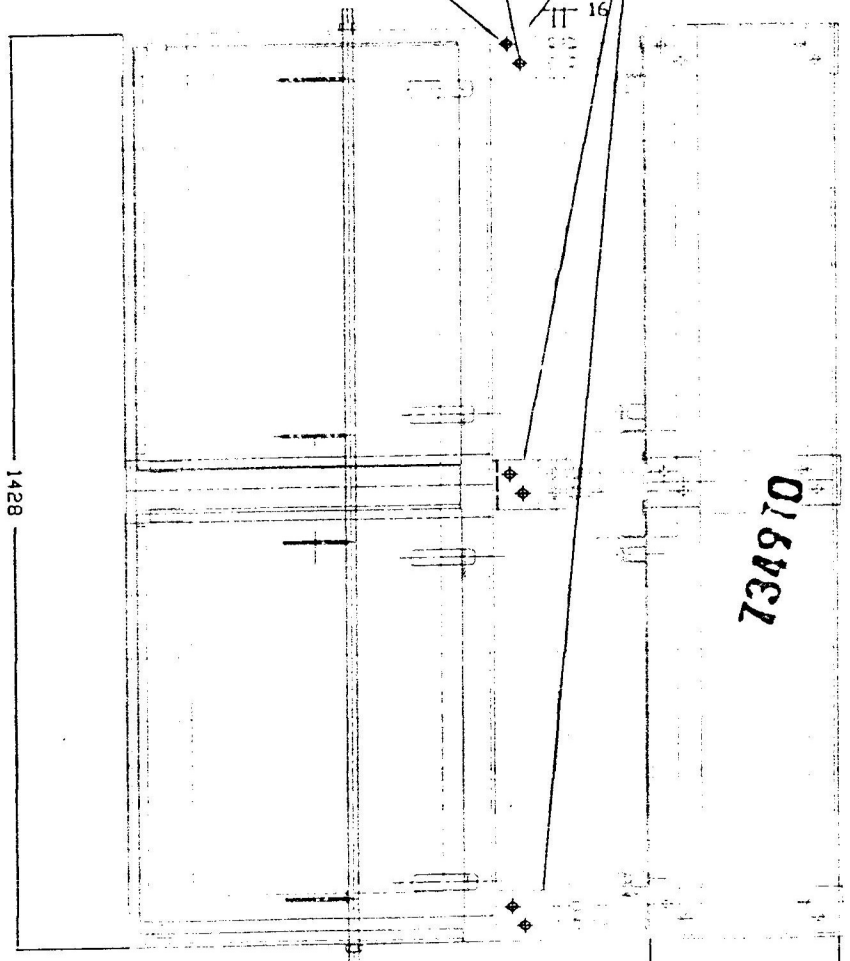
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Clamping bracket  
for strengthening



DIMENSION OF CLAMPING BRACKET

M10 SIZE NUT AND  
BOLT FOR FIXING CLAMP BRACKET



1022

1428

NOTE:

1. All dimension are in mm.
2. For detail dimension refer CLW drawing no 06/1/53/12 and 06/1/53/13.
3. For fixing clamping bracket use M 10x50 mm size nut and bolt of property class 8.8.
4. Clamping bracket for strengthening should be as per IS:2062/92.

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