SWITCH ANGLE AT TOE---------0°- 46' -59"

DIVERGENCE AT HEEL-------- 182 mm

THROW AT TOE ------------------115 mm

GAUGE---------------------------------1673 mm

RADIUS--------------------------------232260 mm

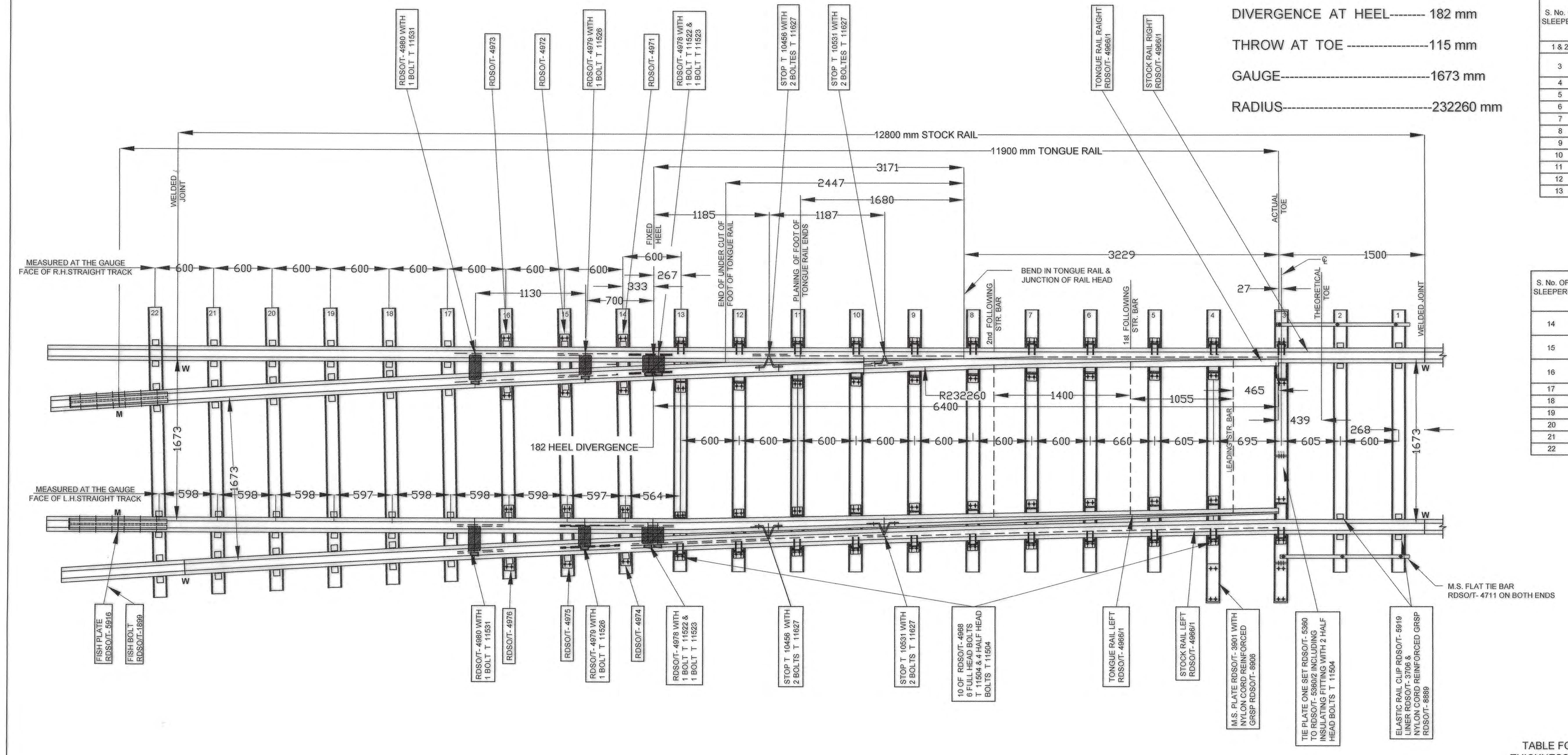
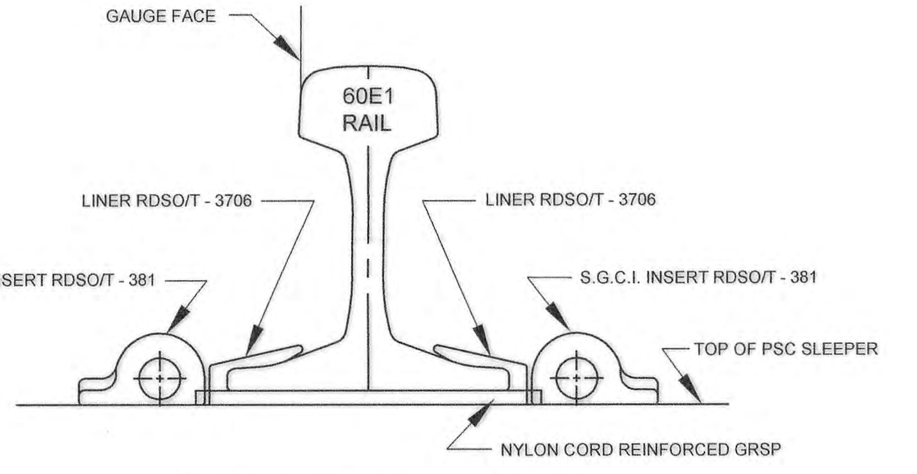



TABLE OF SLEEPERS & THEIR FITTINGS

| S. No. OF SLEEPERS | SLEEPER TO DRG. No. | LENGTH (mm) | TIE PLATE ONE SET OF RDSO/T- 5360 TO RDSO/T- 5360/2 WITH FITTING | 2 Nos. NYLON CORD REINFORCED GRSP TO DRG. No. | 24 DIA. PLATE SCREWS RDSO/T- 3912 | INSULATING LINER RDSO/T- 3706 | ELASTIC RAIL CLIPS MK - V RDSO/T- 5919 | SLIDE CHAIRS RDSO/T- 4968 | SINGLE COIL SPRING WASHER T 10773 | M.S. PLATE RDSO/T- 3901 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 & 2 | RDSO/T- 4512 | 2750 | ----- | 4 (RDSO/T- 8889) | 4 | 8 | 8 | --- | 4 | --- |
| 3 | RDSO/T- 4793 | 3750 | ONE SET | RDSO/T- 8911 & RDSO/T- 8906 | 14 | --- | --- | --- | 14 | --- |
| 4 | RDSO/T- 4794 | 3750 | ----- | -----DO----- | 12 | --- | --- | 2 | 12 | 1 |
| 5 | RDSO/T- 4795 | 2750 | ----- | RDSO/T- 8911 | 8 | --- | --- | 2 | 8 | --- |
| 6 | RDSO/T- 4796 | 2750 | ----- | -----DO----- | 8 | --- | --- | 2 | 8 | --- |
| 7 | RDSO/T- 4797 | 2750 | ----- | -----DO----- | 8 | --- | --- | 2 | 8 | --- |
| 8 | RDSO/T- 4798 | 2750 | ----- | -----DO----- | 8 | --- | --- | 2 | 8 | --- |
| 9 | RDSO/T- 4799 | 2750 | ----- | -----DO----- | 8 | --- | --- | 2 | 8 | --- |
| 10 | RDSO/T- 4800 | 2750 | ----- | -----DO----- | 8 | --- | --- | 2 | 8 | --- |
| 11 | RDSO/T- 4801 | 2770 | ----- | -----DO----- | 8 | --- | --- | 2 | 8 | --- |
| 12 | RDSO/T- 4802 | 2790 | ----- | -----DO----- | 8 | --- | --- | 2 | 8 | --- |
| 13 | RDSO/T- 4803 | 2820 | ----- | -----DO----- | 8 | --- | --- | 2 | 8 | --- |

| S. No. OF SLEEPERS | SLEEPER TO DRG. No. | LENGTH (mm) | 2 Nos. NYLON CORD REINFORCED GRSP TO DRG. No. | 24 DIA. PLATE SCREWS TO DRG. No. RDSO/T- 3912 | SPL. FLAT BEARING PLATE TO DRG. No. | SINGLE COIL SPRING WASHER T10773 | NYLON CORD REINFORCED GRSP RDSO/T- 8955 | NYLON CORD REINFORCED GRSP RDSO/T- 8887 | ELASTIC RAIL CLIPS MK - V RDSO/T- 5919 | INSULATING LINER RDSO/T- 3706 |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 | RDSO/T- 4804 | 2840 | RDSO/T- 8913 | 8 | RDSO/T- 4971 & RDSO/T- 4974 | 8 | 4 | --- | 4 | 4 |
| 15 | RDSO/T- 4805 | 2870 | RDSO/T- 8913 | 8 | RDSO/T- 4972 & RDSO/T- 4975 | 8 | 4 | --- | 4 | 4 |
| 16 | RDSO/T- 4806 | 2900 | RDSO/T- 8913 | 8 | RDSO/T- 4973 & RDSO/T- 4976 | 8 | 4 | --- | 4 | 4 |
| 17 | RDSO/T- 4807 | 2930 | ------- | --- | ------- | --- | --- | 4 | 6 | 6 |
| 18 | RDSO/T- 4808 | 2960 | ------- | --- | ------- | --- | --- | 4 | 8 | 8 |
| 19 | RDSO/T- 4809 | 2990 | ------- | --- | ------- | --- | --- | 4 | 8 | 8 |
| 20 | RDSO/T- 4810 | 3020 | ------- | --- | ------- | --- | --- | 4 | 8 | 8 |
| 21 | RDSO/T- 4811 | 3060 | ------- | --- | ------- | --- | --- | 4 | 8 | 8 |
| 22 | RDSO/T- 4812 | 3100 | ------- | --- | ------- | --- | --- | 4 | 8 | 8 |




METHOD OF USE OF LINERS

TABLE FOR TONGUE RAILS SHOWING LOCATION AND HEAD THICKNESS AT LEVEL POINT OF STOCK RAIL AND TONGUE RAIL

| S. No. | REFERENCE DRG. No. OF TONGUE RAIL | LOCATION OF 13 mm HEAD FROM ATS (IN mm) | LOCATION OF JOH FROM ATS (IN mm) | LOCATION OF LEVEL POINT OF STOCK & TONGUE RAIL FROM ATS (IN mm) | HEAD THICKNESS OF TONGUE RAIL AT LEVEL POINT (IN mm) |
|---|---|---|---|---|---|
| 1 | RDSO/T- 4966/1 | 476.5 | 3229 | 2348 | 48.25 |

## PART - A

| PART | DESCRIPTION | No. OFF |
|---|---|---|
| T 11636 | CUT HEAD BLACK BOLTS 18X70 | 12 |
| T 11634 | TURNED BOLTS 18X75 | 2 |
| T 11635 | TURNED BOLTS 18X80 | 12 |
| T 11522 | BOLTS 25X270 | 2 |
| T 11523 | BOLTS 25X280 | 2 |
| T 11526 | BOLTS 25X310 | 2 |
| T 11531 | BOLTS 25X360 | 2 |
| RDSO/T- 8887 | NYLON CORD REINGORCED GRSP | 24 |
| RDSO/T- 8911 | NYLON CORD REINGORCED GRSP | 22 |
| RDSO/T- 8906 | NYLON CORD REINGORCED GRSP | 4 |
| RDSO/T- 8889 | NYLON CORD REINGORCED GRSP | 4 |
| RDSO/T- 8955 | NYLON CORD REINGORCED GRSP | 12 |
| RDSO/T- 8913 | NYLON CORD REINGORCED GRSP | 6 |
| T 083(M) | LUG | 1 |
| T 10773 | SINGLE COIL SPRING WASHERS | 162 |
| RDSO/T- 3912 | PLATE SCREWS | 126 |
| T 11504 | BOLTS FOR M.S.S.C. 25X90 | 12 |
| T 023(M) | SPHERICAL WASHERS | 8 |
| T 10531 | STOPS | 2 |
| T 10456 | STOPS | 2 |
| T 11627 | STOP BOLTS 18X65 | 8 |

* 6 Nos. EXTRA FOR MAINTENANCE PURPOSE.

| PART | DESCRIPTION | No. OFF |
|---|---|---|
| RDSO/T- 4711 | M.S. FLAT TIE BAR | 2 |
| RDSO/T- 3901 | M.S. PLATE | 1 |
| T 11636 | CUT HEAD BLACK BOLTS 18X70 | 12 |
| T 11634 | TURNED BOLTS 18X75 | 2 |
| T 11635 | TURNED BOLTS 18X80 | 12 |
| T 11522 | BOLTS 25X270 | 2 |
| T 11523 | BOLTS 25X280 | 2 |
| T 11526 | BOLTS 25X310 | 2 |
| T 11531 | BOLTS 25X360 | 2 |
| RDSO/T- 8887 | NYLON CORD REINGORCED GRSP | 24 |
| RDSO/T- 8911 | NYLON CORD REINGORCED GRSP | 22 |
| RDSO/T- 8906 | NYLON CORD REINGORCED GRSP | 4 |
| RDSO/T- 8889 | NYLON CORD REINGORCED GRSP | 4 |
| RDSO/T- 8955 | NYLON CORD REINGORCED GRSP | 12 |
| RDSO/T- 8913 | NYLON CORD REINGORCED GRSP | 6 |
| RDSO/T- 5919 | ELASTIC RAIL CLIPS MK - V | 66 |
| RDSO/T- 3706 | INSULATING LINERS | 66 |
| T 083(M) | LUG | 1 |
| RDSO/T- 4985 & RDSO/T- 4986 | 2nd FOLLOWING STR. BAR INSULATED | ONE SET |
| RDSO/T- 4983 & RDSO/T- 4984 | 1st FOLLOWING STR. BAR INSULATED | ONE SET |
| RDSO/T- 4981 & RDSO/T- 4982 | LEADING STR. BAR INSULATED | ONE SET |
| T 10773 | SINGLE COIL SPRING WASHERS | 162 |
| RDSO/T- 1899 | FISH BOLTS | 12 |
| RDSO/T- 5916 | FISH PLATES | 4 |
| RDSO/T- 4968 | SLIDE CHAIRS | 20 |
| RDSO/T- 3912 | PLATE SCREWS | 126 |
| T 11504 | BOLTS FOR M.S.S.C. 25X90 | 12 |
| T 11504 | BOLTS HALF HEAD M.S.S.C. 25X90 (11 mm TH. BOLT HEAD) | 10+6*=16 |
| RDSO/T- 5360 TO RDSO/T- 5360/2 | INSULATED TIE PLATE (EXTENDED) | ONE SET |
| T 023(M) | SPHERICAL WASHERS | 8 |
| T 10531 | STOPS | 2 |
| T 10456 | STOPS | 2 |
| T 11627 | STOP BOLTS 18X65 | 8 |
| RDSO/T- 4980 | DISTANCE BLOCKS | 2 |
| RDSO/T- 4979 | DISTANCE BLOCKS | 2 |
| RDSO/T- 4978 | HEEL BLOCKS | 2 |
| RDSO/T- 4971 TO RDSO/T- 4976 | BEARING PLATE | ONE EACH |
| RDSO/T- 4966/1 | TONGUE RAIL LEFT | 1 |
| RDSO/T- 4966/1 | TONGUE RAIL RIGHT | 1 |
| RDSO/T- 4966/1 | STOCK RAIL LEFT | 1 |
| RDSO/T- 4966/1 | STOCK RAIL RIGHT | 1 |

## NOTE

13. SINGLE COIL SPRING WASHERS TO DRG. No. T 10773 SHALL BE USED WITH ALL PLATE SCREWS TO DRG. No. RDSO/T- 3912.
12. THE PARTS LIST OF THIS DRAWING DOES NOT INCLUDE FITTINGS FOR APPROACH SLEEPERS. THESE SHOULD BE INDENTED FOR SEPARATELY, IF REQUIRED.
11. THE JOINT AHEAD OF ACTUAL TOE SHALL BE A WELDED JOINT. A MACHINED JOINT TO DRG. No. RDSO/T- 2594 MAY BE PROVIDED AS A PURELY TEMPORARY MEASURE PRIOR TO SITE WELDING OF THE JOINT.
10. SINGLE COIL SPRING WASHERS TO DRG. No. T 10773 SHALL BE USED WITH ALL BOLTS OF 25 mm DIA.
09. FULL HEAD BOLT TO DRG. No. T 11504 SHALL BE USED FOR SLIDE CHAIR ON SLEEPER No. 8 TO 13.
08. HALF HEAD BOLT (11 mm BOLT - HEAD THICKNESS) TO DRG. No. T 11504 SHALL BE USED FOR SLIDE CHAIR ON SLEEPER No. 3 TO 7.
07. THE STOCK RAILS ARE TO BE SUPPLIED BY THE MANUFACTURER AND EACH TONGUE RAIL WITH SWITCH STOPS SHALL BE BOLTED TO THE RESPECTIVE STOCK RAIL WITH C.I. HEEL BLOCK BOLTED IN PLACE AND THE END OF THE TONGUE RAIL SHALL BE LASHED TO THE STOCK RAIL WITH STOUT WIRE.
06. THE FISH PLATED JOINTS SHOWN IN THE LAYOUT ARE MACHINED JOINTS TO DRG. No. RDSO/T- 2594.
05. SLIDE CHAIRS AND BOLTS ARE SAME FOR BOTH SIDES.
04. THE PARTS LIST IN THIS DRAWING INCLUDES INSULATED STRETCHER BARS.
03. THOSE BOLTS WHICH ARE SKEW TO THE RAILS SHALL HAVE SPHERICAL WASHERS T023 (M) SHOWN ON THE DRAWING THUS--------- THESE SPHERICAL WASHERS SHALL BE PROVIDED AT LEFT HAND SIDE OF HEEL BLOCK & DISTANCE BLOCKS FOR BOTH LH & RH SWITCH.
02. LATEST ALTERATION NUMBER SHALL BE CHECKED BEFORE PLACING ORDER.
01. ALL DIMENSIONS ARE IN MILLIMETRES.

23. ALL SHARP EDGES FORMED DUE TO MACHINING SHALL BE REMOVED BY FILING/GRINDING TO A SUITABLE RADIUS OF 2R TO 3R UNLESS OTHERWISE SPECIFIED.
22. THE CURVED TONGUE & STOCK RAILS SHALL BE GIVEN THE CORRECT BEND AS SHOWN IN DRG. No. RDSO/T- 4865 BY THE MANUFACTURE BEFORE DESPATCH FROM HIS WORKS WHILE INDENTING FOR THE TURNOUTS, THE RAILWAY SHALL CLEARLY INDICATE THE NUMBER OF L.H. & R.H. TURNOUT REQUIRED BY THEM. AS THE CURVATURE OF TONGUE & STOCK RAILS GIVEN BY THE MANUFACTURER IS LIKELY TO GET DISTURBED DURING TRANSIT TO THE SITE, THE SAME SHALL BE CHECKED & RECTIFIED BY THE S.S.E. (P.WAY) WHILE LAYING IN THE TRACK.
21. SLEEPER No. 14 AND ONWARDS ARE LAID IN FANSHAPED.
20. PRIME QUALITY RAILS OF R260 GRADE (AS PER IRS: T - 12) TO BE USED FOR MANUFACTURING OF SWITCHES.
19. THE JOINTS SHOWN IN THE DRAWING AS 'W' ARE WELDED JOINTS AND THE JOINTS SHOWN IN THE DRAWING AS 'M' ARE MACHINED JOINTS.
18. 10% QUANTITY (i.e. $\frac{1}{10}$ th Nos. OF THE QUANTITY OF PURCHASE ORDER OF 1 IN 8.5, 60E1 OVER-RIDING SWITCH) OF BREAKAGE PRONE AND WEAR PRONE SPARE PARTS (SHOWN IN PART - A OF DRG. No. RDSO/T- 4966) SHALL BE PROCURED WITH EVERY PURCHASE ORDER OF 1 IN 8.5, 60E1 OVER-RIDING SWITCH FOR REPLACEMENT OF THESE SPARE PARTS AS PER NEED DURING SERVICE LIFE OF THE 1 IN 8.5, 60E1 OVER-RIDING SWITCH.
17. WHEN THIS ASSEMBLY IS USED WITH 1 IN 8.5 CMS CROSSING TO DRG. No. RDSO/T- 4967, THE CHECK RAIL TO DRG. No. RDSO/T- 4018 SHALL BE PROCURED SEPARATELY FROM THE SWITCH MANUFACTURING FIRMS AS PER THE FIELD REQUIREMENT.
16. THE HEAD, WEB AND FOOT OF EACH RAIL SHALL BE ULTRASONICALLY TESTED BY THE MANUFACTURER THROUGH A COMPETENT PERSON BEFORE USING THE RAILS FOR MANUFACTURE. A PERSON POSSESSING A COMPETENCY CERTIFICATE ISSUED BY DIRECTOR GENERAL (M&C) RDSO SHALL BE DEEMED A COMPETENT PERSON.
15. ALL BOLT HOLES IN TONGUE & STOCK RAILS SHALL BE CHAMFERED BY THE MANUFACTURER. FOR THIS PURPOSE, CHAMFERING TOOLS TO DRG. No. RDSO/T- 5210 TO RDSO/T- 5212 SHALL BE USED.
14. NYLON CORD REINFORCED GRSP SHALL BE USED UNDER SLIDE CHAIRS, TIE PLATES AND SPECIAL BEARING PLATES AS SHOWN IN TABLE ALONGSIDE.

| SPECIFICATION | SCALE |
|---|---|
| IRS: T- 10 | NOT TO SCALE |

| ALT: | DESCRIPTION | DATE |
|---|---|---|
| 08. | REVISED & REDRAWAN<br>v) PART LIST MODIFIED<br>iv) DESCRIPTION OF DRAWING MODIFIED<br>iii) PART - A ADDED<br>ii) NOTE No. 18 TO 23 ADDED<br>i) NOTE No. 15 & 17 (ALT- 7) MODIFIED | 15-07-2025 |
| 07. | TABLE FOR TONGUE RAILS SHOWING LOCATION AND HEAD THICKNESS AT LEVEL POINT OF STOCK RAIL AND TONGUE RAIL ADDED | 30-08-2024 |
| 06. | REVISED & REDRAWAN<br>PART LIST AND TABLE OF SLEEPERS & THEIR FITTINGS MODIFIED TO REPLACE "GROOVED RUBBER SOLE PLATES " WITH "NYLON CORD REINFORCED GRSP" | 20-09-2021 |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R. D. S. O.

# 6400 mm OVER-RIDING SWITCH (CURVED) B.G. (1673 mm) FOR 60E1 RAIL ON PSC SLEEPERS

STAND.
CANCLD.
REVD.

ADVANCE 27-12-1991 (T)

RDSO/T- 4966

DST-III PRADIP KUMAR SINGH
APPD:
ADE/T/P & C PRAVEEN KUMAR YADAV
RAM MOHAN (SSE/Track)
SANJEEV KUMAR (SSE/Track)
R.P. VERMA (SSE/Track)
DRG: CH:
M.K. MANDAL (SSE/Track)
DRG: BY:
C.R.No. PAGES
CT/PTX n.p. No. 20 & 21 (Sl. No. 6420 TO ---------)


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