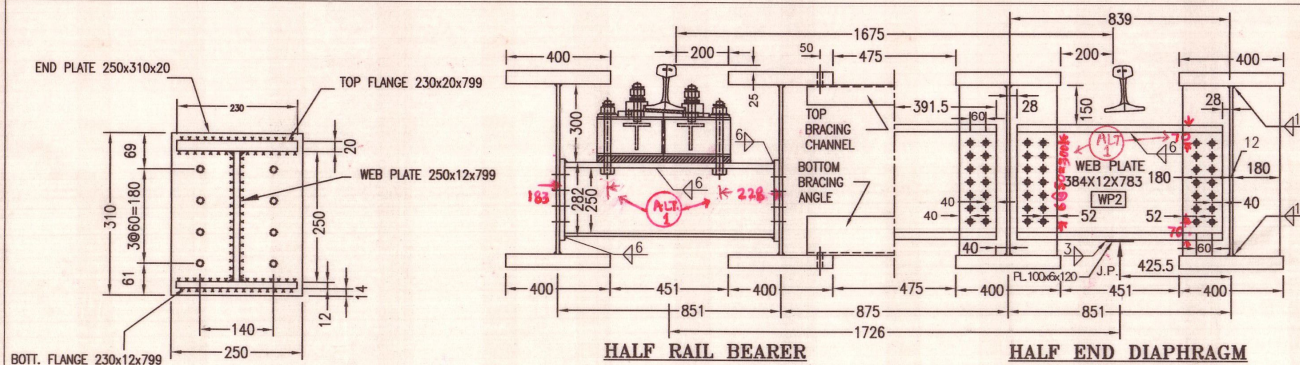




RAIL BEARER X-SECTION

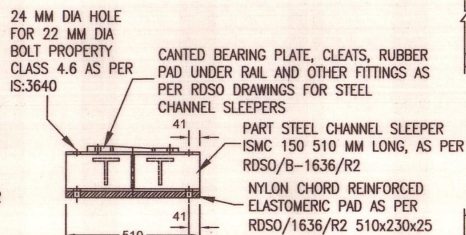
17. RAIL LEVEL TO BOTTOM OF GIRDER [MAX. AT SPLICE LOCATION] = 831 mm.

- FOR EASY LAUNCHING, IT IS RECOMMENDED THAT TWO LEAVES ON EACH SIDE SHALL BE ASSEMBLED AND LAUNCHED. INSIDE LATERAL BRACING SHALL BE PROVIDED WITH TURNED BOLTS AFTER LAUNCHING.
- IN ADDITION TO WELDING TO GIRDER WEB, BEARING STIFFENERS SHALL BE WELDED TO TOP/BOTTOM FLANGE ALSO. INTERMEDIATE STIFFENERS ARE NOT REQUIRED IN THIS GIRDER.
- CALCULATED DEFLECTION UNDER DESIGN LOADS IS 64.78 mm WHICH IS MORE THAN MAXIMUM PERMITTED DEFLECTION 33.33 mm AS PER SBC CLAUSE 4.17. HOWEVER SAME HAS BEEN CONSIDERED OK FOR THE SLOW SPEEDS OVER RH GIRDER, IN ORDER TO REDUCE THE WEIGHT OF GIRDER.
- THE APPROACH TRACK WHERE THE RH GIRDER IS USED SHALL BE COMPLIANT TO PROVISIONS OF PARA 277 OF IRPWM. IT SHALL SPECIALLY BE ENSURED THAT THERE IS NO RAIL JOINT WITHIN 3m OF CENTER LINE OF ABUTMENT.
- GUARD RAILS ARE NOT REQUIRED AS INNER GIRDERS WORK AS GUARD RAILS ALSO.
- RAIL JOINTS SHALL BE PROVIDED BETWEEN THE RAIL BEARERS PROVIDED AT 290 MM C/C (AT 13.83 M FROM ONE END AND 6.57 M FROM OTHER END).
- THE RH GIRDER SHALL BE INSPECTED BY BRIDGE INSPECTOR AS PER IRBM PARA 1107 ONCE IN FIVE YEARS. IF THE GIRDER IS IN USE IN TRACK FOR MORE THAN SIX MONTHS CONTINUOUSLY, THEN IT SHALL BE INSPECTED IN DETAIL BY BRIDGE INSPECTOR ONCE AGAIN.
- BEFORE USE OF THE GIRDER FOR ANY WORK, THE FOLLOWING SHALL BE CHECKED/ENSURED:
 - THAT THE ASSEMBLY OF GIRDER LEAVES HAS BEEN DONE PROPERLY. FOR THIS PURPOSE, TRACK GAUGE, CROSS-LEVELS OF THE GIRDER, AND PROPER FIXING OF BRACING, DIAPHRAGMS AND SPLICES SHALL BE ENSURED.
 - THAT TURNED BOLTS HAVE BEEN PROVIDED AND TIGHTENED PROPERLY.
 - THAT THE GIRDERS AND ITS COMPONENTS ARE NOT EXCESSIVELY CORRODED.
- THE GIRDERS, WHEN NOT IN USE IN TRACK, SHALL BE KEPT PROPERLY ON WOODEN PACKING/CRIB STAGING SUFFICIENTLY AWAY FROM GROUND SO THAT THE RAIN SPLASHES, SOIL, VEGETATION etc. DO NOT CORRODE THE GIRDER COMPONENTS & SHALL BE PROVIDED WITH LONG LIFE PAINTS INCLUDING METALLISING DURING INITIAL FABRICATION AND SUBSEQUENTLY WHEN SIGNS OF CORROSION APPEAR.
- ALL HOLES ARE 21.5 MM DIA UNLESS OTHERWISE INDICATED IN THE DRAWING.
- THE DUPLICATED GIRDER WITH TRACK SHALL BE KEPT ASSEMBLED. THE TWO GIRDERS ON EITHER SIDE SHALL BE CONNECTED TOGETHER USING 20 MM DIA PROPERTY CLASS 8.8 HSFG BOLTS. THESE BOLTS SHALL BE PROVIDED AS PER DRAWING NO RDSO/B-11760R. THE SURFACES JOINED TOGETHER BY HSFG BOLTS SHALL BE METALLISED AS PER CLAUSE 39 OF IRS-B1 BUT NOT PAINTED OVER AND DRAWING NO RDSO/B-11760R. ALL HSFG BOLTS ONLY MUST BE PROVIDED WITH A WELDING TACK AS PER CLAUSE 215 A (ii) OF IRBM TO DESTROY THREADS AND TO PREVENT THESE FROM OPENING.
- BEING EMERGENCY RELIEVING GIRDER THE SPLICES, BRACING, LATERAL RESTRAINTS AND END DIAPHRAGMS ARE PROVIDED WITH 20 MM NOMINAL DIA (ACTUAL DIA 21.2 MM) CLOSE FITTED TURNED BOLTS TO IS:3640 PROPERTY CLASS 4.6. WHENEVER GIRDERS ARE ASSEMBLED, THE ASSEMBLY DRAWING AND SHIPPING LIST MAY BE REFERRED.
- THE MAIN FILLET WELDS CONNECTING FLANGES WITH WEB SHALL BE DONE USING AUTOMATIC SUBMERGED ARC WELDING WITH WIRE-FLUX COMBINATION TO IRS M-39 SPECIFICATIONS. THE WELDS IN STIFFENERS/DIAPHRAGMS AND TACK WELDS SHALL BE MADE PREFERABLY BY CO₂ WELDING, OR BY GOOD QUALITY MANUAL METAL ARC WELDING.
- ALL STEEL SHALL BE AS PER IS-2062. STEEL AS SPECIFIED IN CLAUSE 8.2 OF IRS B1-2001 SHALL BE USED FOR MAIN GIRDERS, STIFFENERS AND RAIL BEARERS ETC. FOR BRACING, DIAPHRAGM AND LATERAL RESTRAINTS ONLY, STEEL AS SPECIFIED IN CLAUSE 8.1 OF IRS B1-2001 CAN BE USED.

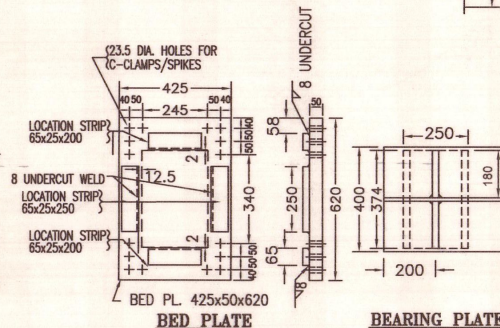
DESCRIPTION	SYMBOLS
FILLET WELD (ONE SIDE)	
ANCHOR BOLTS	
HSFG BOLTS	
TURNED & FITTED BOLTS	

- THE DESIGN IS AS PER BRIDGE RULES, STEEL BRIDGE CODE AND WELDED BRIDGE CODE, FOR TEMPORARY GIRDER, FIT FOR 25T LOADING-2008 WITH MAXIMUM SPEED 20 Km/h. GIRDER HAS BEEN CHECKED FOR 5 GMT, 100 YEARS LIFE WITH NEW FATIGUE CRITERIA, UPTO SEISMIC ZONE V.
- ALL DIMENSIONS ARE IN MILLIMETERS.

NOTE



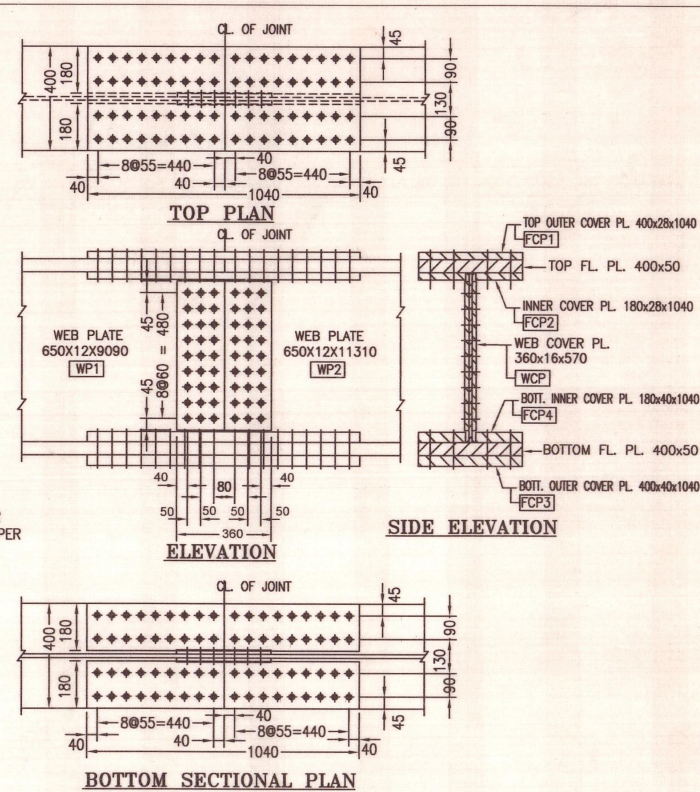
DETAILS OF PART-SLEEPER



BED PLATE

BEARING PLATE

18. THIS DESIGN IS SUITABLE FOR STRAIGHT TRACK ONLY.



SIDE ELEVATION

BOTTOM SECTIONAL PLAN

MAIN DRAWING

DESCRIPTION	REFERENCE
GENERAL ARRANGEMENT AND DETAILS OF MAIN GIRDER	RDSO/B-11041R
यह दृष्टि अनुसन्धान अभिकल्प एवं मानक संगठन (रेल मंत्रालय) लखनऊ - 226011 (भारत) की संपत्ति है तथा बिना पूर्व लिखित अनुमति के इसका इस्तेमाल नहीं होना चाहिए अथवा इसकी/इसके किसी भाग की प्रतिलिपि नहीं बनायी जानी चाहिए। THIS DRAWING IS THE PROPERTY OF RESEARCH DESIGNS & STANDARDS ORGANISATION (MINISTRY OF RAILWAYS) LUCKNOW-226011 (INDIA) AND SHALL NOT BE USED, COPIED OR REPRODUCED IN PART OR WHOLE WITHOUT PRIOR CONSENT IN WRITING. श्री. अ. मा. सी. ए. डी. एस. ओ.	

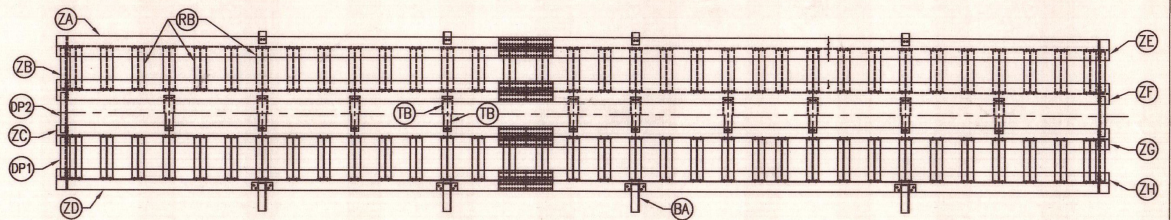
"25T LOADING-2008" "25 टन भार 2008"
TEMPORARY DOUBLE-I PLATE GIRDER- WELDED
TYPE 20.4m OVERALL LENGTH
अस्थायी दो - I सेक्शन प्लेट गार्डर - वेल्डेड प्रकार
20.4 मी. औवरऑल लम्बाई
DETAILS OF X-SECTION, SPLICE JOINT AND BEARING
क्रॉस-सेक्शन, स्प्लाइस जोइंट और बेयरिंग का विवरण

PROVISIONAL DATE-26.02.2015

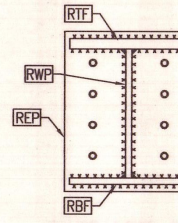
RDSO/B-11041/1R

डिजाइन रजिस्टर सं. DD/2014/17	रेखांकन-MOHD. AZHAR (S.S.E.)	मिलान एवं जांच - ADE/SB-II	मिलान एवं जांच - DBS/SB-II	अनुमोदन - EDBS	ऑटो कैड फाइल सं - B11041-1R
पृष्ठ डिजाइन-NILESH KUMAR (S.S.R.E.)	जांच-NILESH KUMAR (S.S.R.E.)				नोटिफिकेशन सं -
1-52 जांच-UMA SHANKER (J.E.)					

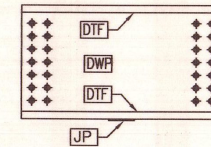
S. NO.	DIMENSIONS			PART LIST / PART NAME	NOS PAR SHIPPING MARK	SHIPPING MARK/NAME	DIMENSION L*B*H	TOTAL NOS PAR SPAN ARRANGEMENT	WEIGHT IN TONNE			
	LENGT H	WIDT H	THICKNE SS									
1.1	9090	400	50	TF1 /TOP FLANGE	1	ZA/GIRDER COMPLETE	400*800*9090	1	1.427			
1.2	9090	400	50	BF1/BOTTOM FLANGE	1				1.427			
1.3	9090	12	650	WP1/WEB PLATE	1				0.557			
1.4	650	180	25	BS1/ BEARING STIFFENER	1				0.023			
1.5	650	180	25	BS2/BEARING STIFFENER	1				0.023			
1.6	374	250	50	BEARING PLATE	1	ZB/GIRDER COMPLETE	400*800*9090	1	0.037			
2.1	9090	400	50	TF2 /TOP FLANGE	1				1.427			
2.2	9090	400	50	BF2/BOTTOM FLANGE	1				1.427			
2.3	9090	12	650	WP1/WEB PLATE	1				0.557			
2.4	650	180	25	BS2/ BEARING STIFFENER	1				0.023			
2.5	650	180	25	BS3/BEARING STIFFENER	1	ZC/GIRDER COMPLETE	400*800*9090	1	0.023			
2.6	374	250	50	BEARING PLATE	1				0.037			
3.1	9090	400	50	TF3 /TOP FLANGE	1				1.427			
3.2	9090	400	50	BF3/BOTTOM FLANGE	1				1.427			
3.3	9090	12	650	WP1/WEB PLATE	1				0.557			
3.4	650	180	25	BS3/ BEARING STIFFENER	1	ZD/GIRDER COMPLETE	400*800*9090	1	0.023			
3.5	650	180	25	BS2/BEARING STIFFENER	1				0.023			
3.6	374	250	50	BEARING PLATE	1				0.037			
4.1	9090	400	50	TF4 /TOP FLANGE	1				1.427			
4.2	9090	400	50	BF4/BOTTOM FLANGE	1				1.427			
4.3	9090	12	650	WP1/WEB PLATE	1	ZE/GIRDER COMPLETE	400*800*9090	1	0.557			
4.4	650	180	25	BS2/ BEARING STIFFENER	1				0.023			
4.5	650	180	25	BS1/BEARING STIFFENER	1				0.023			
4.6	374	250	50	BEARING PLATE	1				0.037			
5.1	11310	400	50	TF5/TOP FLANGE	1				1.776			
5.2	11310	400	50	BF5/BOTTOM FLANGE	1	ZF/GIRDER COMPLETE	400*800*11310	1	1.776			
5.3	11310	12	650	WP2/WEB PLATE	1				0.693			
5.4	650	180	25	BS1/ BEARING STIFFENER	1				0.023			
5.5	650	180	25	BS2/BEARING STIFFENER	1				0.023			
5.6	374	250	50	BEARING PLATE	1				0.037			
6.1	11310	400	50	TF6 /TOP FLANGE	1	ZG/GIRDER COMPLETE	400*800*11310	1	1.776			
6.2	11310	400	50	BF6/BOTTOM FLANGE	1				1.776			
6.3	11310	12	650	WP2/WEB PLATE	1				0.693			
6.4	650	180	25	BS2/BEARING STIFFENER	1				0.023			
6.5	650	180	25	BS3/ BEARING STIFFENER	1				0.023			
6.6	374	250	50	BEARING PLATE	1	ZH/GIRDER COMPLETE	400*800*11310	1	0.037			
7.1	11310	400	50	TF7 /TOP FLANGE	1				1.776			
7.2	11310	400	50	BF7/BOTTOM FLANGE	1				1.776			
7.3	11310	12	650	WP2/WEB PLATE	1				0.693			
7.4	650	180	25	BS3/BEARING STIFFENER	1				0.023			
7.5	650	180	25	BS2/ BEARING STIFFENER	1	ZJ/GIRDER COMPLETE	400*800*11310	1	0.023			
7.6	374	250	50	BEARING PLATE	1				0.037			
8.1	11310	400	50	TF8 /TOP FLANGE	1				1.776			
8.2	11310	400	50	BF8/BOTTOM FLANGE	1				1.776			
8.3	11310	12	650	WP2/WEB PLATE	1				0.693			
8.4	650	180	25	BS2/BEARING STIFFENER	1	ZK/GIRDER COMPLETE	400*800*11310	1	0.023			
8.5	650	180	25	BS1/ BEARING STIFFENER	1				0.023			
8.6	374	250	50	BEARING PLATE	1				0.037			
9.1	783	120	28	DTF/ DIAPHRAGM TOP/BOTTOM FLANGE	2				DP1/END DIAPHRAGM OUTER	783*120*446	4	0.165
9.2	783	384	12	DWP/ DIAPHRAGM WEB PLATE	1				DP1/END DIAPHRAGM INNER			0.113
9.3	100	120	6	JP/JACKING PLATE	1		0.002					
10.1	783	120	28	DTF/ DIAPHRAGM TOP/BOTTOM FLANGE	2	DP2/END DIAPHRAGM OUTER	783*120*440	2	0.083			
10.2	783	384	12	DWP/ DIAPHRAGM WEB PLATE	1	DP2/END DIAPHRAGM INNER			0.057			
11.1	799	230	20	RTF / DIAPHRAGM TOP FLANGE	1				1.962			
11.2	799	250	12	RBF/ DIAPHRAGM BOTTOM FLANGE	1	RB/RAIL BEARER	839*250*310	68	1.280			
11.3	799	230	12	RWP/ DIAPHRAGM WEB PLATE	1				1.177			
11.4	250	310	20	REP/RAIL BEARER END PLATE	2				1.655			
12	675	-	ISMC 200	TBC/TOP BRACING CHANNEL	1	TB/ TOP BRACING CHANNEL	675*150*75	10	0.149			
13	675	-	ISA 150x10	BBA/BOTTOM BRACING ANGLE	1	BA/ BOTTOM BRACING ANGLE	675*150*150	10	0.154			
14.1	235	-	ISA 150x15	LRT/LATERAL RESTRAINT TOP ANGLE	1	LR/LATERAL RESTRAINT	1040*400*28	4	0.032			
14.2	535	-	ISA 150x15	LRB/LATERAL RESTRAINT BOTTOM ANGLE	1				0.072			
14.3	598	-	ISMC 150	LRC/LATERAL RESTRAINT CHANNEL	1				0.039			
14.4	400	150	12	LBP/LATERAL RESTRAINT BOTTOM PLATE	1				0.023			
15.1	1040	400	28	FCP1/TOP FLANGE OUTER COVER PLATE	1				FCP1/SPUCE PLATE	1040*400*28	4	0.366
15.2	1040	180	28	FCP2/TOP FLANGE INNER COVER PLATE	2	FCP2/SPUCE PLATE	1040*180*28	4	0.329			
15.3	1040	400	40	FCP3/BOTTOM FLANGE OUTER COVER PLATE	1	FCP3/SPUCE PLATE	1040*400*40	4	0.522			
15.4	1040	180	40	FCP4/BOTTOM FLANGE INNER COVER PLATE	2	FCP4/ SPUCE PLATE	1040*180*40	4	0.470			
15.5	570	360	16	WCP/WEB COVER PLATE	2	WP/SPUCE PLATE	570*360*16	4	0.206			
TOTAL (T)									40.135			
						ADD 2% FOR BOLTS/ WELDS (T)			0.803			
TOTAL WEIGHT OF COMPLETE GIRDER WITHOUT TRACK (T)									40.938			
NO OF HSFG BOLTS 20 MM DIA PROPERTY CLASS 8.8									1088			
NO OF TURNED BOLTS 21.2 MM ACTUAL DIA PROPERTY CLASS 4.6									1108			
22 MM DIA BOLTS PROPERTY CLASS 4.6 FOR HOLDING PART SLEEPERS WITH RAIL BEARERS									136			



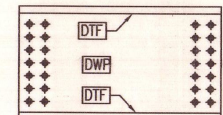
PLAN SHOWING SHIPPING LIST NOS



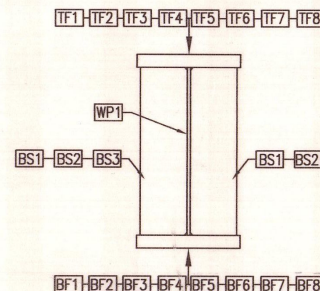
PART LIST OF RAIL BEARERS (RB)



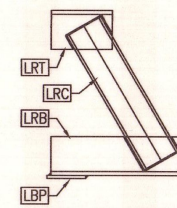
PART LIST OF OUTER END DIAPHRAGMS (DP1)



PART LIST OF INNER END DIAPHRAGMS (DP2)



PART LIST OF MAIN GIRDER LEAVES



PART LIST OF TOP BRACING CHANNEL (TB)

PART LIST OF BOTTOM BRACING ANGLE (BA)

PART LIST OF LATERAL RESTRAINT (LR)

MAIN DRAWING

DESCRIPTION	REFERENCE
GENERAL ARRANGEMENT AND DETAILS OF MAIN GIRDER	RDSO/B-11041R

यह ड्राइंग अनुसंधान अभिकल्प एवं मानक संगठन (रेल मंत्रालय) लखनऊ - 226011 (भारत) की संपत्ति है तथा बिना पूर्व लिखित अनुमति के इसका इस्तेमाल नहीं होना चाहिए अथवा इसकी/इसके किसी भाग की प्रतिलिपि नहीं बनायी जानी चाहिए.

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अ. अ. मा. सं. R. D. S. O.

"25T LOADING-2008" "25 टन भार 2008"
TEMPORARY DOUBLE-I PLATE GIRDER- WELDED
TYPE 20.4m OVERALL LENGTH
 अस्थायी दो - I सेक्शन प्लेट गर्डर - वेल्डेड प्रकार
 20.4 मी. ओवरऑल लम्बाई
PART LIST AND SHIPPING NO.
 पार्ट लिस्ट और शिपिंग नं.

PROVISIONAL DATE-26.02.2015

RDSO/B-11041/2R

BEARING STIFFENER BS1 BEARING STIFFENER BS2 BEARING STIFFENER BS3

(SIZE A3) - NOT TO SCALE

1. DIMENSION ALTERED

NOTE

SPECIFICATION

SCALE

ALT.

DESCRIPTION

DATE