WESTERN RAILWAY

पश्चिम रेलवे
Western Railway

Office of the
Chief Workshop Manager,
(EWS), Kaligaon,
Sabarmati, Ahmedabad-382470
E-mail-cwmewsbi787@gmail.com

No. FIU/EW/SBI/Dept. W.O.No. 67971372

Date: 15.04.2025

Dy.CE/EW/SBI

CLEARANCE REPORT

Project: Inspection of fabrication for 04x12.2m WPG, 25T loading for regirdering of Bridge No. 954 at km 708/18-19 for Ahmedabad-Palanpur section of ADI Division, WR.

Ref.:
i) P-7 for W.O. 67671372 Dt.07.03.2024 Dt. 09.10.2024.
ii) SSE/STR/EW/SBI's letter No. STR/Inspection Dt. 21.12.2024.
iii) This office letter no. FIU/EW/SBI/12.2m (Dept.) Dt. 24.12.2024.

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With reference to above, inspection of fabrication of steel bridge girders for above subjected work was carried out by FIU/SBI as per approved QAP & WPSS.

Details are as under:

Sr.	Description	Details
1	Project Location:	Bridge No. 954 at km 708/18-19 for Ahmedabad-Palanpur section of ADI Division, WR
2	Project Executing Agency:	Dy.CE/Br./ADI
3	Division:	Ahmedabad.
4	Consignee:	SSE/ (Br.), ADI.
5	Span details:	04x12.2m STD WPG
6	Work Order No.:	67971372
7	Address of Fabricator:	Engineering Workshop, Kaligaon, Sabarmati, Ahmedabad-382470.
8	Place of Inspection:	Engineering Workshop, Sabarmati's factory premises.
9	Type of inspection:	Raw material & consumables Layout, Master plate & WPQR Dimension & Welding inspection at factory premises.
10	Drawing no.:	For 12.2m WPG: RDSO/B-16014/R2 series.

Project background:

- Dy.CE/Br./ADI send W.O. No. W65/PB/497/202-24/1 dated 02.02.2024 for above subjected girders.
- P7 for starting the fabrication of 04x12.2m STD WPG was issued on 09.10.2024. (ref.i)
- SSE/STR/EW/SBI sent QAP & WPSS for scrutiny and approval of competent authority on 21.12.2024.
- Approval of QAP & WPSS sent to SSE/STR/EW/SBI on 24.12.2024.

Details of inspections:

Sr.	Date of Inspection	Type of inspection	Date of clearance issued
1	01.03.2025	Raw materials & consumables clearance report	01.03.2025
2	25.01.2025	WPQR Inspection	03.02.2025
3	26.12.2024	JIG & Master plate / layout Inspection	
4	18.01.2025, 28.01.2025, 03.02.2025, 04.02.2025 & 17.02.2025	Components welding inspection	20.02.2025
5	04.02.2025, 10.02.2025, 15.02.2025	Components dimensional inspection	This letter Dt. 15.04.2025

Cont...2

Details of inspection reports:

1. Quality Assurance Plan (QAP) & Welding Procedure Specification Sheet (WPSS)
   QAP & WPSS is approved by this office and same is kept on records. (at page no. 10-44).

2. Welding Procedure Qualification Record (WPQR)
   WPQR Approval vide this office and same is kept on records (at page no. 45-58)

3. Details of raw materials & consumables.
   MS plates conforming IS 2062:2011/ E-250 'B0' has been procured from SAIL & Welding Consumables have been procured through RDSO approved vendors & Invoices, Mill Test Certificate are kept on records. (at page no. 71-93)

4. Calibration Certificate of Measuring Instruments Calibration Certificate of Measuring Tape, Welding Gauge etc. are kept on records (at page no. 94-110)

5. Dimension register
   Fabrication of all components of WPG is done by using Layout & Master plates approved by FIU/EW/SBI. Cutting dimensions are measured and details are on records. Day to day inspection were carried out by internal inspection unit of EW/SBI and same is kept on records. (at page no. 111-127)

6. Welding Register (WPDR)
   Fabricator's welding procedure data register is kept on records. Day to day inspection were carried out by internal inspection unit/concerned shop of EW/SBI and same is kept on records. (at page no. 128-132)

7. NDT Register (DPT & Macro Etching)
   Day to day inspection were carried out by QC-Lab of EW/SBI and same is kept on records. (at page no. 133-139)

8. Welding clearance
   Welding inspection were carried out by QC-Lab of EW/SBI and details are on records. (at page no. 140-141)

9. Metalizing and Paint Register
   Day to day inspection of blasting/metalizing/painting were carried out by internal inspection unit/concerned shop of EW/SBI and details are on records. (at page no. 142-146)

In view of above, 04x12.2m STD WPG as per RDSO/B-16014/R2 series for above subject work are found satisfactory as per approved QAP & WPSS and can be used for further process.

16/04/2025

AWM/EW/SBI
For CWM (EWS)/ADI

C/- SSE/STR/PCO: For information and n/a.
C/- SSE/STR: For information and n/a.

LIST OF RECORDS/DOCUMENTS
For 04x12.2m WPG of Br. No. 954 at Km 708/18-19 for Ahmedabad-Palanpur section of ADI Division.

P7

Form No. P-7
C&W12F/P-7

P-7 (C&W) PROGRESS SHEET

Work Order No. : 67971372, dt: 07.03.2024 **Date: 09.10.2024**

Name of Work : Fabrication and Supply of 04x12.2m WPG, 25T loading for regirdering of Bridge No. 954 at km-708/18-19 for Ahmedabad-Palanpur section of ADI division, WR.

Description : Manufacturing and supplying of four numbers of 12.20 meter Solid web steel plate girder including bearing plate, bed plate and all components with metallising.

Reference : Dy.CE(Br.), ADI's W.O. No. W65/PB/497/2023-24/1 dated 02.02.2024.

Ch/to : Dy.CE/Br./ADI.
Accounting Unit : Sr. SO(A/C), ADI.
Drawing No. : RDSO-B-16014/R2 to 16014/5R2 series
Case No. : PO/1/ADI/15

Head of A/C : RRSK 29-32-51-03(PB/497/2023-24)
Consignee : SSE(Br.), ADI
Weight : 58.0 MT (Approx.)
Shop No. : 11 (STR)

Requirement of Materials for 04x12.2m WPG

Sr. no.	Description	Components	Quantity (Kg)	Req. plate size as per drg.	Issued P-8	Remarks
1	ISMC 150x75 MM	Elastomeric bearing	52	-	-	Adj. from W.O. No. 66243506.
2	ISA 75x75x10 MM	X frame angle	700	-	779505	-
3	ISA 100x100x12 MM	Lateral Angle	1476	-	-	Will be issued later on.
4	MS Plate 05 MM	Cap Plate of Elastomeric bearing	12	-	-	उपरोक्त सामग्री UDM में P-8 बनाकर प्राप्त करे।
5	MS Plate 10 MM	Intermediate Stiffener	1016	-	-	Adj. from W.O. No. 66243555.
6	MS Plate 12 MM	Diaph. Web Plate, Diaph. Bearing Stiffener, Diaph. Top and Btm flange plate, Pad plate, X-frame Gusset plate, Web cover plate	2864	2.5x10m=01 nos	779500	2355 Kg issued through P-8. Remaining 509 Kg to be adjusted from W.O. No. 66243555.
7	MS Plate 16 MM	Web plate (Long & Short), Top Flange cover plate	17160	2.5x10 = 06 nos	779501	1680 Kg to be taken in excess.
8	MS Plate 28 MM	Top Flange Plate (Long & Short) & End Stiffener	13848	2x10 = 04 nos	779502	3736 Kg to be taken in excess.
9	MS Plate 40 MM	Btm Flange Plate(Long & Short), Btm Splice cover plate	19304	2.5x10 = 04 nos	779503 779504	5456 Kg to be taken in excess.
10	MS Plate 50 MM	Bearing plate & Bed plate	3020	-	-	Adj. from W.O. No. 66243592.
		Total	**59452**			

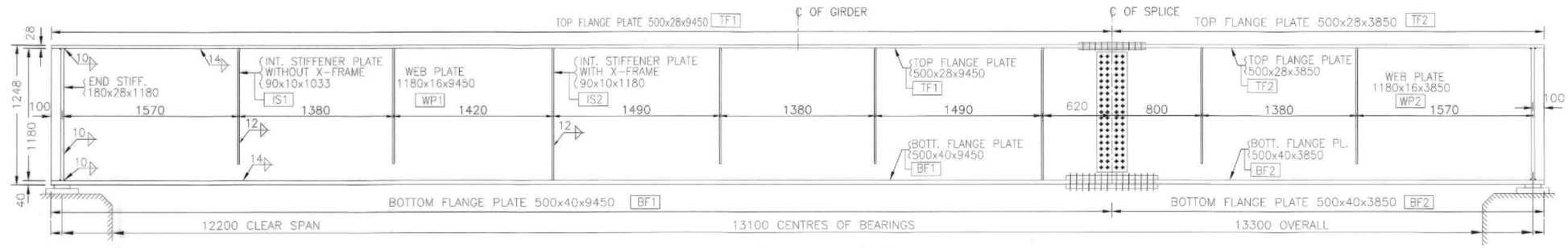
DA/- As above P8's

Note: 1. For serial no. 3 suggest an alternate section to be used in lieu of ISA 100x100x12mm (Unit weight is 17.7Kg/m) after layout. Alternate sections with higher unit weight available at present are: i. ISA 130x130x10mm(Unit Weight - 19.7 Kg/m). Check suitability of this section and inform to this office regarding the same.

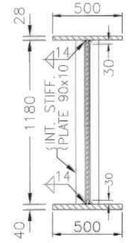
2. As per CWM Sir's order above 04x12.2m WPG has to be dispatched till 30 Dec 2024.

Dy CE(EWS), SBI

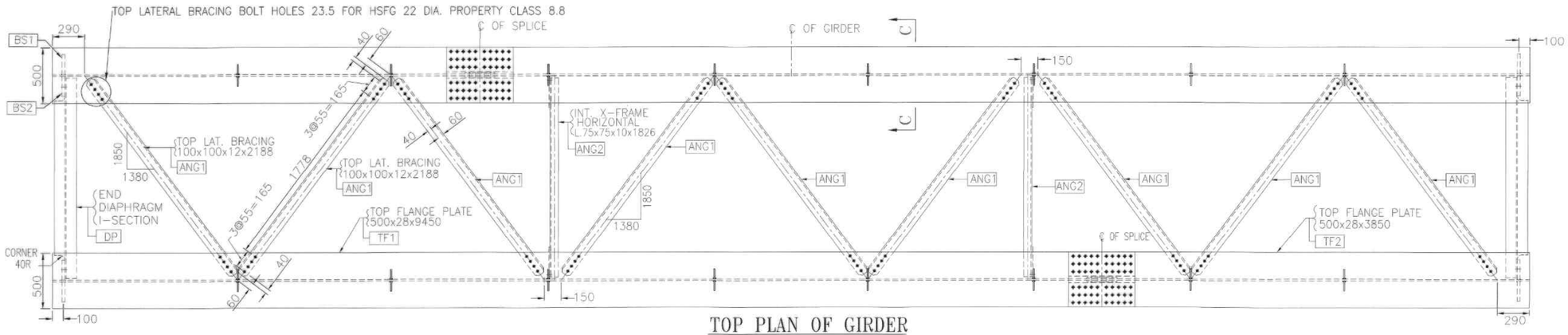
APPROVED DRAWINGS



ELEVATION OF GIRDER



SECTION ON CC



TOP PLAN OF GIRDER

WEIGHT OF SPAN IN TONNES (STEEL)	
SPAN WITHOUT BEARING*	ELASTOMERIC BEARING
13.98	0.8902

* THE TOTAL WEIGHT OF SPAN INCLUDES WEIGHT OF BOLTS AND WELD @ 2%.

DEFLECTION(MM)			
DUE TO DEAD LOAD OF STEEL GIRDER	DUE TO SIDL OF TRACK AND CHANNEL SLEEPERS	DUE TO LIVE LOAD WITH IMPACT LOAD	TOTAL DEFLECTION (MM)
0.65	0.28	11.37	12.30

DESCRIPTION	
HSFG BOLTS	◆
FILLET WELD (ONE SIDE)	⏥
FILLET WELD (BOTH SIDE)	→

S.N.	DESCRIPTION	REFERENCE
1	DETAILS OF SPLICE JOINT & BOTTOM SECTIONAL PLAN	RDSO/B-16014/1R2
2	DETAILS OF X-FRAME	RDSO/B-16014/2R2
3	ELASTOMERIC BEARING DETAILS	RDSO/B-16014/3R1
4	WELDING SEQUENCE	RDSO/B-16014/4R1
5	PART LIST & ASSEMBLY DRAWING	RDSO/B-16014/5R2
6	NOTES FOR USE OF HSFG BOLTS IN BRIDGES	RDSO/B-11760/R1
7	PROVISION OF SIDE PATHWAY	CBS-0042 to 0042/3

17. ANTI-SKID CHEQUERED PLATES FOR GANGWAY,TROLLY REFUGE,MAN REFUGE,SIDE PATHWAY ETC.SHALL BE CONFORMING TO LATEST IS 6911,ISS SYMBOL 409M,MINIMUM 6MM THICK (EXCLUDING BEAD HEIGHT) WITH FLAT BOTTOM AND TOP PATTERN CONFORMING TO IS:3502,1A. FOR COASTAL/CORROSIVE AREAS, THICKNESS MAY BE SUITABLY INCREASED DEPENDING UPON SEVERITY OF CORROSION. APPROPRIATE MATCHING STAINLESS STEEL GRADE FASTENERS AS RECOMMENDED BY MANUFACTURER SHALL BE USED.
16. THIS DESIGN IS SUITABLE FOR MAXIMUM PERMISSIBLE SPEED AS GIVEN IN PARA 3.3.1 OF THE BRIDGE RULE AND MAXIMUM PERMISSIBLE SPEED ON TRACK DUE TO CURVE WHICHEVER IS LESS.
15. MAXIMUM DEFLECTION COMPUTED IS 12.30 mm i.e. 1 in 1065.
14. GUARD RAIL SHALL BE PROVIDED AS PER PROVISIONS OF IRPWM.
13. CONCRETE BED BLOCKS FOR NEW WORKS SHALL BE MINIMUM M25. FOR EXISTING WORKS, BED BLOCKS SHALL BE MINIMUM M20.
12. ALL STEEL FOR MAIN GIRDERS INCLUDING STIFFENERS SHALL BE AS PER IS: 2062 AS GIVEN IN PARA 8.2 OF IRS B1-2001. FOR OTHER MEMBERS LIKE BRACING, X-FRAMES AND DIAPHRAGMS, STEEL SHALL BE AS PERIS: 2062 AS GIVEN IN PARA 8.1 OF IRS B1-2001.
11. THE SURFACE PREPARATION, TIGHTENING PROCEDURE AND OTHER DETAILS FOR HSFG BOLTS SHALL BE AS PER DRG. NO. RDSO/B-11760/R1.
10. THE GIRDER HAS BEEN CHECKED FOR LAUNCHING AS SINGLE LEAVES WITHOUT ANY BRACING. SINGLE GIRDER LEAF CAN BE HANDLED NEAR THE BEARING STIFFENER.
9. ALL HOLES ARE 21.5 DIA FOR 20 DIA. HSFG BOLTS OF PROPERTY CLASS 8.8 EXCEPT WHERE OTHERWISE SHOWN.
8. ALL INTERMEDIATE STIFFENERS SHALL BE CONNECTED TO THE WEB BY FILLET WELDS AND NOT WELDED TO FLANGE. THE INTERMEDIATE STIFFENERS SHALL BE MACHINE FIT WHEREVER THESE TOUCH THE FLANGES.
7. END STIFFENERS SHALL BE CONNECTED TO WEB BY 10 mm FILLET WELD ALL AROUND, INCLUDING WITH FLANGES.
6. FILLET WELDS IN FLANGES TO WEB CONNECTION SHALL BE MADE ONLY BY AUTOMATIC SUB-MERGED ARC WELDING TECHNIQUE. ALL OTHER WELDS SHOULD BE DONE BY SAW AS FAR AS POSSIBLE, IN CASE SAW IS NOT POSSIBLE OR DIFFICULT TO BE DONE, OTHER WELDS SHALL BE PREFERABLY MADE BY GMAW/FCAW. MMAW MAY BE USED IF APPROVED BY ENGINEER-IN-CHARGE.
5. FABRICATION SHALL BE DONE AS PER STIPULATIONS OF IRS B1. ALL WELDS SHALL BE MADE BY USING APPROVED WELDING PROCEDURES AND BY QUALIFIED WELDERS APPROVED FOR APPROVED WELDING PROCEDURE.
4. DESIGN IS SUITABLE FOR BALLAST CUSHION FROM 300 TO 400 mm.
3. THIS DESIGN IS SUITABLE FOR 50 GMT TRAFFIC FOR 100 YEARS OF 25t LOADING-2008 AS PER FATIGUE PROVISIONS.
2. THE DESIGN IS IN ACCORDANCE WITH IRS BRIDGE RULES, STEEL BRIDGE CODE, IRS SEISMIC CODE, WELDED BRIDGE CODE, CONCRETE BRIDGE CODE,AND UIC BEARING DESIGN CODE-772-2R.
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED, NO DIMENSION SHOULD BE SCALED FROM THIS DRAWING.

S. No.	MEMBER	FATIGUE LOADS		WITH OCCASIONAL LOADS	
		ACTUAL (MODIFIED) STRESS RANGE Kg/mm²	ALLOWABLE STRESS RANGE Kg/mm²	ACTUAL STRESS Kg/mm²	ALLOWABLE STRESS Kg/mm²
1	TOP FLANGE PLATE	6.47 (9.06)	11.08	8.76	17.50
2	BOTTOM FLANGE PLATE (ON NET AREA)	7.50 (10.50)	11.08	7.11	17.50
3	WEB PLATE	3.55 (4.97)	8.70	3.11	10.97

ELASTOMERIC BEARINGS	: IRC 83 PART II-2018
STEEL FOR ALL MEMBERS	: IS: 2062-2011
RUBBER BEARING FOR RAIL BRIDGES	: UIC: 772-2R-1989
SCHEME OF SYMBOLS FOR WELDING	: IS: 813-1986
METAL ARC WELDING	: IS: 9595-1996
SUBMERGED ARC WELDING	: IS:4353-1995
ELECTRODES	: IRS M-28
WIRE FLUX COMBINATION FOR SAW	: IRS M-39
FABRICATION SPECIFICATION No.	IRS/B1-2001, REVISED-2008

(SIZE A1)
MILLIMETERS

200 0 200 400 600 800 1000 1:20

R. D. S. O.

" 25T LOADING-2008 "

PLATE GIRDER-WELDED TYPE

12.2 m SPAN

GENERAL ARRANGEMENT AND DETAILS OF MAIN GIRDER

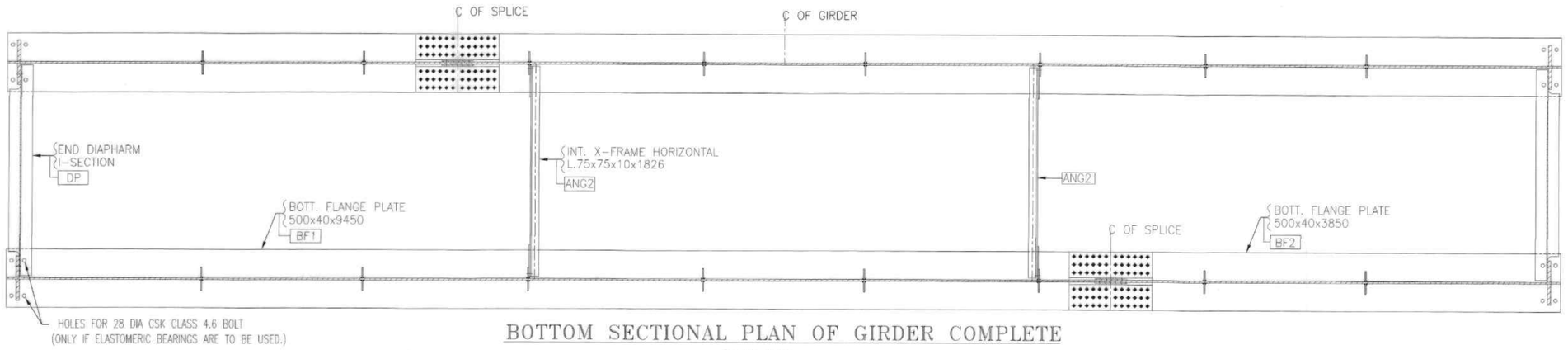
(ELEVATION & TOP PLAN)

PROVISIONAL DATE-28.03.2023

RDSO/B-16014/R2

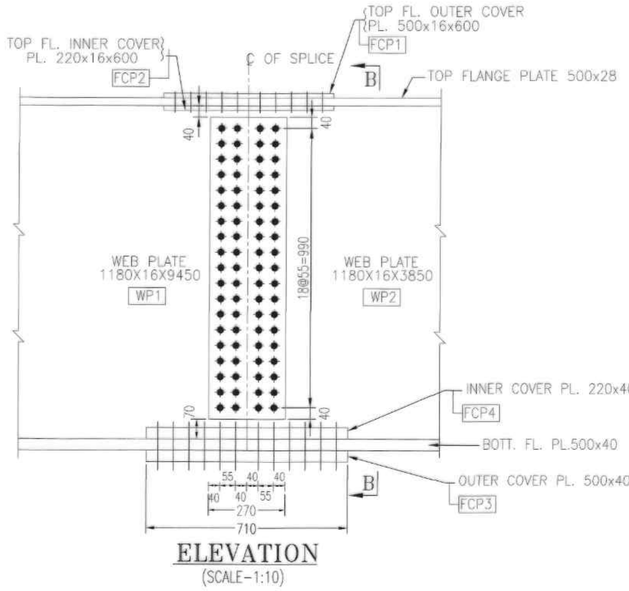
NOTES	SPECIFICATION & CODES	SCALE	ALT.	DESCRIPTION	DATE

DESIGN REGISTER No. No. DD/2023/	DESIGN BY-NILESH KUMAR(SSRE/SB-II)	DRAWN BY-ALOK RANJAN(J.E/D/SB-II) Alok Ranjan	SCRUTINISED & CHECKED BY- SANDEEP AGARWAL (ADE/SB-II/B&S)	SCRUTINISED & RECOMMENDED BY- MANISH KUMAR (DBS-VII/B&S)	APPROVED BY- RAJESH KUMAR SRIVASTAVA(ED/B&S)	AUTOCAD FILE No. RDSO-B-16014-R2
	CHECKED BY-SONU (JE/D/SB-II)	CHECKED BY-ASHOK KUMAR(SSRE/SB-II)				NOTIFICATION No.



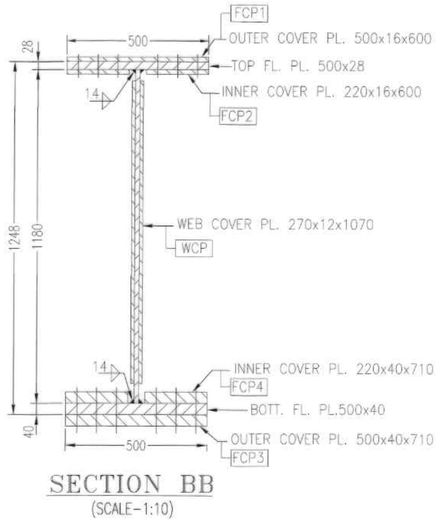
BOTTOM SECTIONAL PLAN OF GIRDER COMPLETE

(SCALE-1:20)



ELEVATION

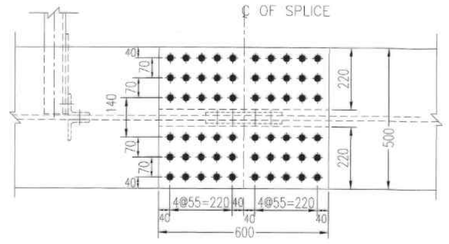
(SCALE-1:10)



SECTION BB

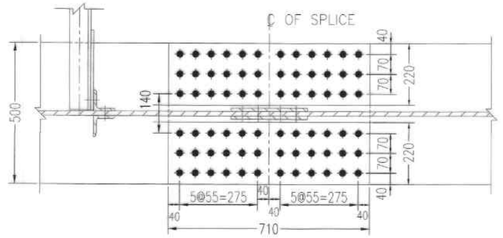
(SCALE-1:10)

SPLICE JOINT DETAILS



TOP PLAN

(SCALE-1:10)



BOTTOM SECTIONAL PLAN

(SCALE-1:10)

DESCRIPTION	
HSFG BOLTS	●
FILLET WELD (ONE SIDE)	▷
FILLET WELD (BOTH SIDE)	▷

MAIN DRAWING

DESCRIPTION	REFERENCE
GENERAL ARRANGEMENT AND DETAILS OF MAIN GIRDER	RDSO/B-16014/R2

4. THE SPLICES GIVEN IN THIS DRAWING ARE OPTIONAL AND MAY BE AVOIDED IF PLATES OF REQUIRED LENGTH ARE AVAILABLE.
3. WEB EDGES TO BE MACHINED AT BOLTED SPLICE LOCATION.
2. THE HOLES ARE 21.5 DIA. FOR 20 DIA. HSFG BOLT OF PROPERTY CLASS 8.8 EXCEPT WHERE OTHERWISE SHOWN.
1. ALL DIMENSIONS ARE IN MILLIMETER, UNLESS OTHERWISE SPECIFIED. NO DIMENSION SHOULD BE SCALED FROM THIS DRAWING.

(SIZE A1)

MILLIMETERS

100 0 100 200 300 400 500 1:10

200 0 200 400 600 800 1000 1:20

R. D. S. O.

"25T LOADING-2008"

PLATE GIRDER-WELDED TYPE

12.2 m SPAN

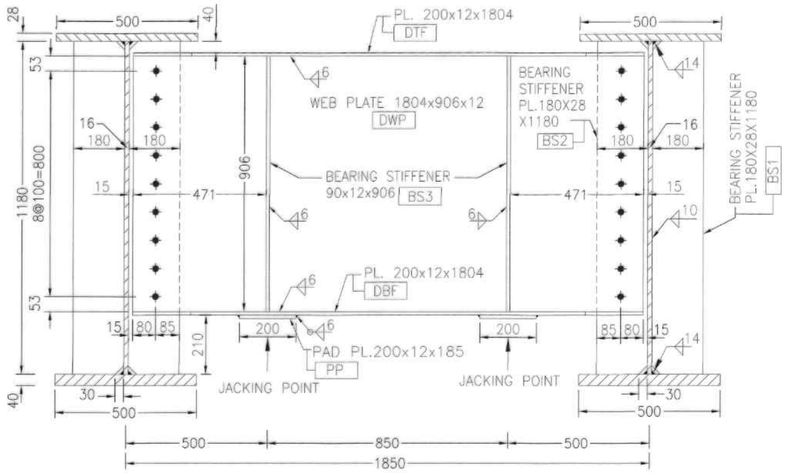
DETAILS OF SPLICE JOINT & BOTTOM SECTIONAL PLAN

PROVISIONAL DATE- 28.03.2023

RDSO/B-16014/1R2

NOTES	SPECIFICATION	SCALE	ALT.	DESCRIPTION	DATE

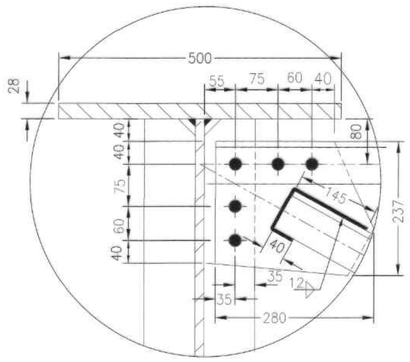
DESIGN REGISTER No. No. DD/2023/	DESIGN BY-NILESH KUMAR(SSRE/SB-II) CHECKED BY-SONU (JE/D/SB-II)	DRAWN BY-ALOK RANJAN(J.E/D/SB-II) CHECKED BY-ASHOK KUMAR(SSRE/SB-II)	SCRUTINISED & CHECKED BY- SANDEEP AGARWAL (ADE/SB-II/B&S)	SCRUTINISED & RECOMMENDED BY- MANISH KUMAR (DBS-VII/B&S)	APPROVED BY- RAJESH KUMAR SRIVASTAVA(ED/B&S)	AUTOCAD FILE No. RDSO-B-16014-1R2 NOTIFICATION No.



END DIAPHRAGM

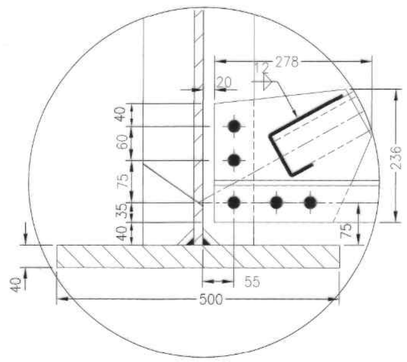
(2 Nos.)

(SCALE–1:10)



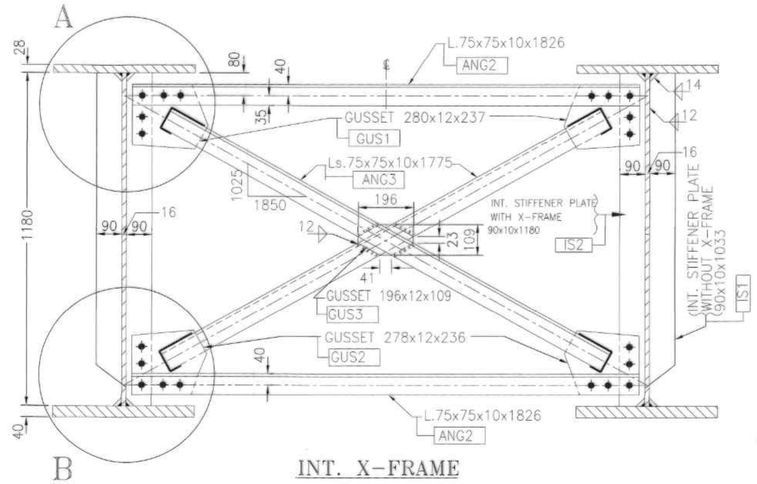
DETAIL AT A

(SCALE–1:5)



DETAIL AT B

(SCALE–1:5)



INT. X–FRAME

(2 Nos.)

(SCALE–1:10)

MAIN DRAWING

DESCRIPTION	REFERENCE
GENERAL ARRANGEMENT AND DETAILS OF MAIN GIRDER	RDSO/B–16014/R2

DESCRIPTION	SYMBOL
FILLET WELD (ONE SIDE)	
FILLET WELD (BOTH SIDES)	
HSFG BOLTS	

3. LIFTING OF GIRDERS SHALL BE DONE SIMULTANEOUSLY AT TWO JACKING POINTS AT ONE END OF SPAN.
2. ALL HOLES ARE 21.5 DIA. FOR 20 DIA. HSFG BOLTS OF PROPERTY CLASS 8.8 EXCEPT WHERE OTHERWISE SHOWN.
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED. NO DIMENSION SHOULD BE SCALED FROM THIS DRAWING.

(SIZE–A1)

MILLIMETERS

100 0 100 200 300 400 500 1:10

50 0 50 100 150 200 250 1:5

R. D. S. O.

"25T LOADING–2008"

PLATE GIRDER–WELDED TYPE

12.2 m SPAN

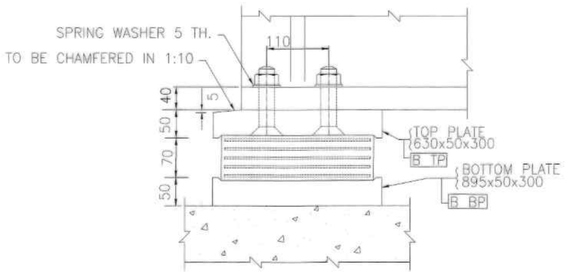
DETAILS OF END DIAPHRAGM, X–FRAME

PROVISIONAL DATE: 28.03.2023

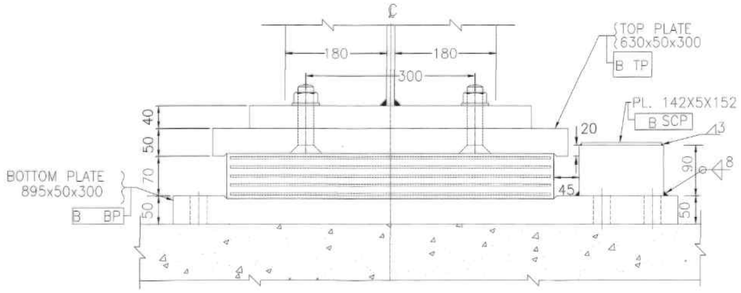
RDSO/B–16014/2R2

NOTES	SPECIFICATION	SCALE	ALT.	DESCRIPTION	DATE

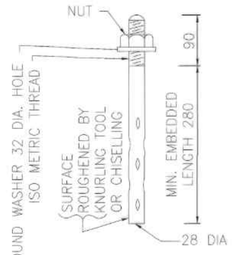
DESIGN REGISTER No.	DESIGN BY–NILESH KUMAR(SSRE/SB–II)	DRAWN BY–ALOK RANJAN(J.E/D/SB–II)	SCRUTINISED & CHECKED BY–	SCRUTINISED & RECOMMENDED BY–	APPROVED BY–	AUTOCAD FILE No. RDSO–B–16014–2R2
No. DD/2023/	CHECKED BY–SONU (JE/D/SB–II)	CHECKED BY–ASHOK KUMAR(SSRE/SB–II)	SANDEEP AGARWAL (ADE/SB–II/B&S)	MANISH KUMAR (DBS–VII/B&S)	RAJESH KUMAR SRIVASTAVA(ED/B&S)	NOTIFICATION NO.



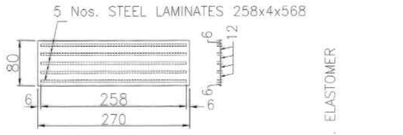
ASSEMBLY DETAILS AT YY



ASSEMBLY DETAILS AT XX

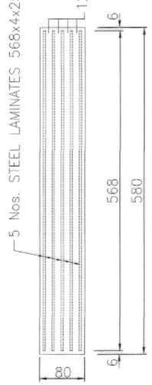


ANCHOR BOLT
(SCHEMATIC)
(GALVANISED)

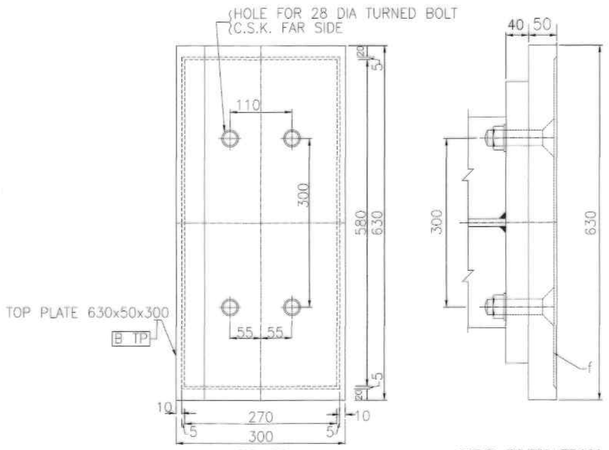


DETAIL OF ELEVATION

ELASTOMERIC PAD
PLAN

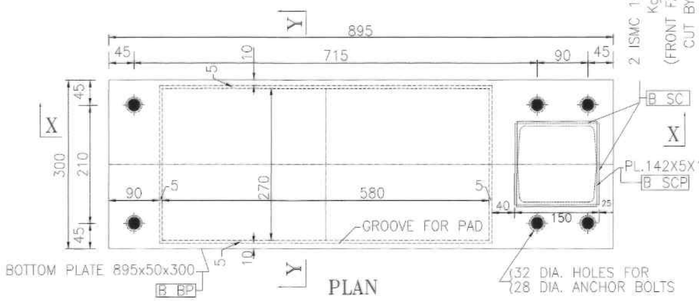


DETAIL OF SIDE
ELEVATION

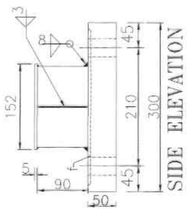


PLAN SIDE ELEVATION

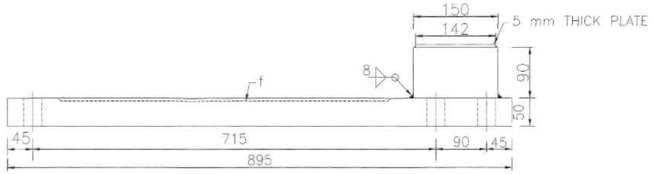
DETAILS OF TOP PLATE
ELASTOMERIC BEARING ASSEMBLY



PLAN

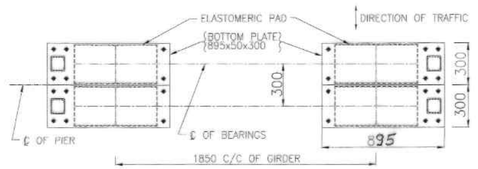


SIDE ELEVATION



ELEVATION

DETAILS OF BOTTOM PLATE



PLAN OF BEARINGS AT PIER
(NOT TO SCALE)

LOADS PER SPAN FOR DESIGN OF SUBSTRUCTURE

LOAD TYPE	LOAD (t) FOR DESIGN			
	DL	SIDL	LL	EQ/WIND
(i) VERTICAL	13.98	5.704	268.33	80.21
(ii) LONGITUDINAL	0	0	63.00	6.66
(iii) LATERAL	0	0	7.98	43.50

19. IN CASE OF MULTI SPAN ARRANGEMENT, IF STRUCTURALLY REQUIRED, SUITABLE LONGITUDINAL SEISMIC RESTRAINERS AND OTHER COMPLIMENTARY MODIFICATIONS IN SUBSTRUCTURES MAY BE DESIGNED AND ADOPTED.
18. ALL HOLES FOR ANCHOR BOLTS ARE 32MM FOR 28MM DIA.
17. PEDESTAL IF PROVIDED, SHALL PROJECT MINIMUM 150 MM BEYOND THE BOTTOM PLATE.
16. ALL BOLTS, NUTS ETC SHALL CONFORM TO PROVISIONS OF IS:1364.
15. THE ANCHOR BOLTS AND THEIR NUTS SHALL BE HOT DIP GALVANIZED 100 MICRON THICK, AS PER IS: 4759.
14. FOR NEW WORKS, RCC BED BLOCK SHALL BE MIN. M25. FOR EXISTING WORKS, RCC BED BLOCK CONCRETE SHOULD NOT BE LESS THAN M20.
13. MACHINED SURFACES SHOWN THUS ~~~f
12. IT IS PREFERABLE THAT BEARING SHALL BE INSTALLED AT NEARLY MEAN TEMPERATURE.
11. BEARINGS MUST BE PLACED BETWEEN TRUE HORIZONTAL SURFACE (MAX. TOLERANCE 0.2% PERPENDICULAR TO LOAD) AND AT TRUE PLAN POSITION OF THEIR CONTROL LINES MARKED ON RECEIVING SURFACES (MAX. TOLERANCE +/-3 mm). PROVISIONS OF PARA 9.3 OF IRC 83 PART II 2018 SHALL BE FOLLOWED FOR INSTALLATION OF BEARINGS.
10. DRAINAGE SHALL BE ENSURED BY PROVIDING SLOPE AWAY FROM BEARING IN ALL DIRECTIONS. (BEARING SHALL REST ON FLAT HORIZONTAL SURFACE).
9. WHEN REPLACING BEARINGS IN EXISTING GIRDERS, ALL BEARINGS IN ONE LINE OF SUPPORT SHALL BE REPLACED TOGETHER.
8. COUNTER SUNK BOLTS SHOULD NOT PROJECT BEYOND MACHINED SURFACES.
7. GROOVED BOTTOM SURFACE OF THE TOP PLATE AND TOP SURFACE OF THE BOTTOM PLATE SHALL BE VULCANIZED TO ELASTOMERIC PAD. PASTING/GLUING OF RUBBER TO STEEL IS NOT ALLOWED.
6. THE ELASTOMERIC PADS SHALL BE OF IRHD-70 AND SHALL CONFORM TO THE SPECIFICATIONS LAID DOWN IN UIC 772-2R.
5. FABRICATION AND TESTING OF BEARINGS SHALL BE DONE AS GIVEN IN IRC 83 PART II 2018, PARA 6 AND 7.
4. MAX. DESIGN PRESSURE BELOW THE BEARING ASSEMBLY IS 0.46207 Kg/mm².
3. THE STATIC SHEAR MODULUS FOR THE ELASTOMERIC PADS HAS BEEN ASSUMED AS 0.1 MPa.
2. THE DESIGN IS BASED ON UIC CODE-772-2R, "CODE FOR THE USE OF RUBBER BEARING FOR RAIL BRIDGES AND IRC-83 PART-II.
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED. NO DIMENSION SHOULD BE SCALED FROM THIS DRAWING.

DESCRIPTION	SYMBOL
FILLET WELD (ONE SIDE)	
FILLET WELD (BOTH SIDES)	
ANCHOR BOLT	
TURNED BOLT	

SPECIFICATION

(SIZE-A1)
MILLIMETERS
50 25 0 50 100 150 200 250 1:5
200 100 0 200 400 600 800 1000 1:20

SCALE

ALT. DESCRIPTION DATE

MAIN DRAWING

DESCRIPTION	REFERENCE
GENERAL ARRANGEMENT AND DETAILS OF MAIN GIRDER	RDSO/B-16014/R2

R. D. S. O.

25t LOADING-2008"
PLATE GIRDER-WELDED TYPE
12.2m SPAN
ELASTOMERIC BEARING DETAILS

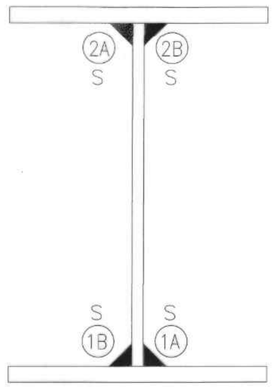
PROVISIONAL DATE- 28.03.2023

RDSO/B-16014/3R1

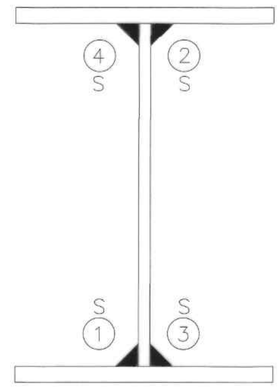
DESIGN REGISTER No.	DESIGN BY-NILESH KUMAR(SSRE/SB-II)	DRAWN BY-ALOK RANJAN(J.E/D/SB-II)	SCRUTINISED & CHECKED BY-	SCRUTINISED & RECOMMENDED BY-	APPROVED BY-	AUTOCAD FILE No. RDSO-B-16014-3R1
No. DD/2023/	CHECKED BY-SONU (JE/D/SB-II)	CHECKED BY-ASHOK KUMAR(SSRE/SB-II)	SANDEEP AGARWAL (ADE/SB-II/B&S)	MANISH KUMAR (DBS-VII/B&S)	RAJESH KUMAR SRIVASTAVA(ED/B&S)	NOTIFICATION No.

FILLET WELDING OF MULTIPLE FLANGE PLATES (IF ANY)

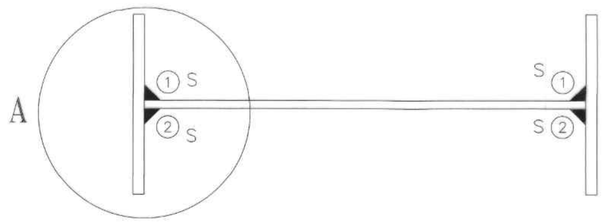
WELDING STAGE I



APPLICATION OF DOUBLE HEAD MACHINE ON GIRDERS ON VERTICAL POSITION.



APPLICATION OF SINGLE HEAD MACHINE



APPLICATION OF DOUBLE HEAD MACHINE ON GIRDERS: LAID FLAT.

WELDING STAGE II

WELDING STAGE I: {FILLET WELDING OF MULTIBLE FLANGE PLATES (IF ANY)}

SEQUENCE AND POSITION OF WELDING.

1. ALL THE WELDING IS TO BE DONE ENTIRELY IN DOWN HAND POSITION. S INDICATES SUBMERGED ARC WELDING.
2. RUN-ON AND RUN-OFF PIECES SHALL BE PROVIDED.
3. AFTER EACH RUN OF WELDING, PLATES SHALL BE CHECKED FOR DEFORMATION.

WELDING STAGE II: (WELDING OF WEB WITH FLANGE PLATES)

1. SEQUENCE AND POSITION OF WELDING.
   ALL THE WELDING IS TO BE DONE ENTIRELY IN DOWN HAND POSITION. S INDICATES SUBMERGED ARC WELDING. Nos. 1, 2, 3 ETC. NEXT TO ABOVE NOTATION INDICATE SEQUENCE BY WHICH THE WELDING IS TO BE PERFORMED. RUN-ON AND RUN-OFF PIECES SHALL BE PROVIDED.

2. APPLICATION OF SINGLE HEAD MACHINE.
   TO WELD GIRDERS WITH SINGLE HEAD MACHINE, FLANGES AND WEBS ARE TO BE SET IN FIXTURE AND TACKED.

3. APPLICATION OF DOUBLE HEAD MACHINE ON GIRDERS LAID FLAT.
   TWO WELDS ARE DEPOSITED ON ONE FACE OF WEB AT A TIME. THIS ARRANGEMENT DOES NOT REQUIRE REMOVAL OF THE ASSEMBLY FROM THE FIXTURE AFTER TACKING. THE FLANGE PLATES ARE SET AGAINST THE WEB IN THE FIXTURE AND TACKED MAIN WELDS, EACH JOINING FLANGE WITH THE WEB, ARE TO BE LAID WHILE ASSEMBLY IS STILL IN THE FIXTURE. AFTER COMPLETION OF FIRST FACE WELDING OF WEB, THE ASSEMBLY IS TO BE TURNED OVER AND WELDING OF THE SECOND FACE DONE.

4. APPLICATION OF DOUBLE HEAD MACHINE ON GIRDERS IN VERTICAL POSITION.
   IN THIS CASE TWO WELDS ARE LAID JOINING EACH FLANGE WITH THE WEB AT A TIME. THIS WILL REQUIRE TACKING OF THE FLANGES WITH THE WEB, WHICH ARE PREVIOUSLY SET IN FIXTURE SPECIALLY MADE FOR THE PURPOSE. THE ASSEMBLY IS TO BE REMOVED FROM THE FIXTURE AFTER TACKING IS COMPLETED AND POSITIONED IN A MANIPULATOR, THE TWO WELDING HEADS ARE OPERATED IN SUCH A WAY ONE HEAD WILL BE AWAY BY 600 mm, BOTH THE HEADS TRAVELLING AT THE SAME SPEED. IT IS ADVISABLE TO LIMIT THE SINGLE RUN WELD TO 6 mm SIZE.

5 AFTER EACH RUN OF WELDING, THE FABRICATED ARTICLE SHALL BE CHECKED FOR ANY DEFORMATION. IN CASE OF DEFORMATION BEYOND PERMISSIBLE LIMITS, THE SAME SHALL BE RECTIFIED BEFORE NEXT STAGE WELDING IS TAKEN UP.

MAIN DRAWING

DESCRIPTION	REFERENCE
DETAILS OF MAIN GIRDER	RDSO/B-16014/R2

NOTES	SPECIFICATION	SCALE	ALT.	DESCRIPTION	DATE
		(SIZE A1) NOT TO SCALE			

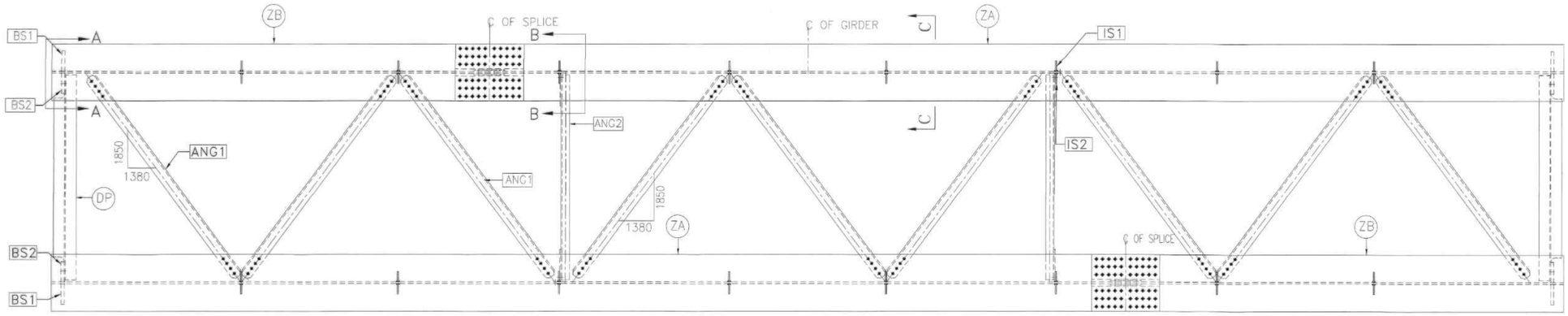
R. D. S. O.

"25t LOADING-2008"
PLATE GIRDER-WELDED TYPE
12.2m SPAN
WELDING SEQUENCE

PROVISIONAL DATE-28-03-2023

RDSO/B-16014/4R1

DESIGN REGISTER No. DD/2023/	DESIGN BY- NILESH KUMAR (SSRE/SB-II)	DRAWN BY -ALOK RANJAN(JE/D/SB-II) Alok Ranjan	SCRUTINISED & CHECKED BY-	SCRUTINISED & RECOMMENDED BY-	APPROVED BY-	AUTOCAD FILE No. RDSO-B-16014-4R1
	CHECKED BY-SONU (JE/D/SB-II)	CHECKED BY-ASHOK KUMAR(SSRE//SB-II)	SANDEEP AGARWAL (ADE/SB-II/B&S)	MANISH KUMAR (DBS-VII/B&S)	RAJESH KUMAR SRIVASTAVA (ED/B&S)	NOTIFICATION No.

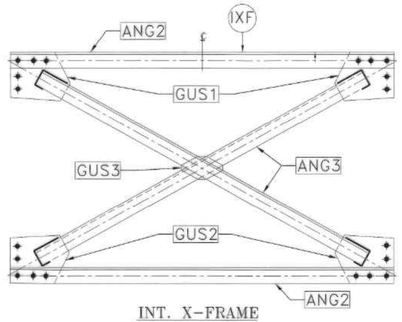


COMPONENT PARTS		SHIPPING MARK/ NAME	DIMENSIONS (L x B x H) MM x MM x MM	TOTAL NOS PER SPAN ARRANGE MENT:
PART LIST NO/ PART NAME	NOS PER SHIPPING MARK			
TF1/ TOP FLANGE	1	ZA/ GIRDER COMPLETE	9450 x 500 x 1248	2 #
BF1/ BOTTOM FLANGE	1			
WP1/ WEB PLATE	1			
IS1/INTERMEDIATE STIFFENER	9			
IS2/INTERMEDIATE STIFFENER	2			
BS1/BEARING STIFFENER	1			
BS2/BEARING STIFFENER	1			
BEARING PLATE (A)	1			
TF2/ TOP FLANGE	1	ZB/ GIRDER COMPLETE	3850 x 500 x 1248	2 #
BF2/ BOTTOM FLANGE	1			
WP2/ WEB PLATE	1			
IS1/INTERMEDIATE STIFFENER	4			
BS1/BEARING STIFFENER	1			
BS2/BEARING STIFFENER	1			
BEARING PLATE (A)	1			
DTF/ DIAPHRAGM TOP FLANGE	1	DP/ END DIAPHRAGM	1804 x 200 x 942	2
DBF/ DIAPHRAGM BOTTOM FLANGE	1			
DWP/ DIAPHRAGM WEB PLATE	1			
BS3/BEARING STIFFENER	4			
PP/PAD PLATE	2			
ANG 2/TOP & BOTTOM ANGLE	2	IXF/ INTERMEDIATE CROSS FRAME	1826 x 1100 x 162	2
ANG 3/ DIAGONAL ANGLE	2			
GUS1/ GUSSET	2			
GUS2/ GUSSET	2			
GUS3/ GUSSET	1			
ANG1/ ANGLE	1	ANG1/ LATERAL BRACING	2188 x 100 x 100X12	9
FCP1/ TOP FLANGE OUTER COVER PLATE	1	FCP1/ SPLICE PLATE	600 x 500 x 16	2 *
FCP2/ TOP FLANGE INNER COVER PLATE	1	FCP2/ SPLICE PLATE	600 x 220 x 16	4 *
FCP3/ BOTTOM FLANGE OUTER COVER PLATE	1	FCP3/ SPLICE PLATE	710 x 500 x 40	2 *
FCP4/ BOTTOM FLANGE INNER COVER PLATE	1	FCP4/ SPLICE PLATE	710 x220 x 40	4 *
WCP/ WEB COVER PLATE	1	WCP/ SPLICE PLATE	270 x 12 x 1070	4 *
NB/NEOPRENE BEARING ASSEMBLY	1	NB/ NEOPRENE BEARING ASSEMBLY		4
-/HOLDING DOWN BOLTS	1	-/ HOLDING DOWN BOLTS		24

* : OPTIONAL

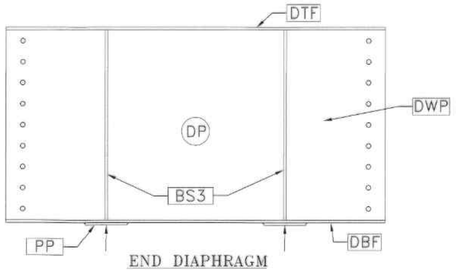
\# : LENGTHS WILL CHANGE IF SPLICE NOT PROVIDED.

TOP PLAN OF GIRDERTOP PLAN



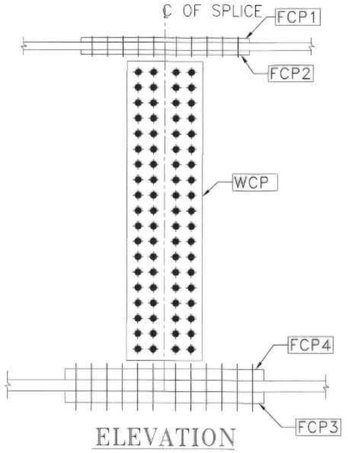
INT. X-FRAME

(2 NOS.)

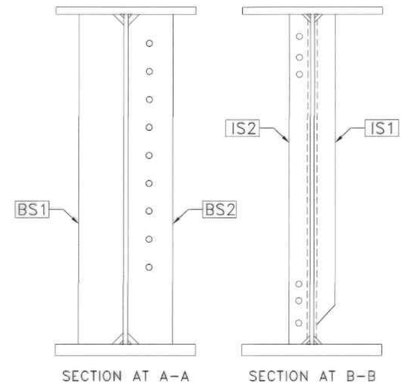


END DIAPHRAGM

(2 NOS.)



ELEVATION



SECTION AT A-A SECTION AT B-B

MAIN DRAWINGS

DESCRIPTION	REFERENCE
GENERAL ARRANGEMENT AND DETAILS OF MAIN GIRDER	RDSO/B-16014/R2

NOTES

7. ASSEMBLY MAY BE DONE AS PER SHIPPING LIST NOS AND ARRANGEMENT GIVEN ABOVE. FOR GENERAL ARRANGEMENT IN DETAILED REFER DRAWING No. RDSO/B-16015/R1.
6. MATCH MARKING MAY BE DONE WHEREVER NECESSARY BEFORE SHIPPING MEMBERS.
5. SHIPPING MARKS ARE TO BE PAINTED IN WHITE LETTERS 100mm HIGH (OR AS LARGE AS THE MEMBER WILL PERMIT) ON EACH MEMBER BEFORE DESPATCH FROM THE WORKS AS THUS--ZA
4. FOR PARTS CONSTITUTING COMPLETE SHIPPING UNIT, SEPARATE PART NO HAS NOT BEEN GIVEN.
3. SHIPING MARK SHOWN THUS ⬭
2. PART LIST NOS SHOWN THUS ▭
1. ALL DIMENSION ARE IN MILLIMETERS. UNLESS OTHERWISE SPECIFIED .NO DIMENSION SHOULD BE SCALED FROM THIS DRAWING.

SPECIFICATION	SCALE	ALT.	DESCRIPTION	DATE
	(SIZE A1) NOT TO SCALE			

R. D. S. O.

"25T LOADING-2008"

12.2 M SPAN PLATE GIRDER-WELDED TYPE

12.2m SPAN

PART LIST & ASSEMBLY DRAWING

PROVISIONAL DATE- 28.02.2023

RDSO/B-16014/5R2

DESIGN REGISTER No.	DESIGN BY-NILESH KUMAR(SSRE/SB-II)	DRAWN BY-ALOK RANJAN(J.E/D/SB-II) Alok Ranjan	SCRUTINISED & CHECKED BY-	SCRUTINISED & RECOMMENDED BY-	APPROVED BY-	AUTOCAD FILE No. RDSO-B-16014-5R2
No. DD/2023/	CHECKED BY-SONU (JE/D/SB-II)	CHECKED BY-ASHOK KUMAR(SSRE/SB-II)	SANDEEP AGARWAL (ADE/SB-II/B&S)	MANISH KUMAR (DBS-VII/B&S)	RAJESH KUMAR SRIVASTAVA(ED/B&S)	NOTIFICATION No.

QUALITY ASSURANCE PLAN (QAP) & WELDING PROCEDURE SPECIFICATION SHEET (WPSS)

WESTERN RAILWAY

पश्चिम रेल
Western Railway

Office of the Chief Engineer,
(EWS), Kaligaon,
Sabarmati, Ahmedabad-382470
E-mail-cwmewsbi787@gmail.com

No. FIU/EW/SBI/30.5m (Dept.)

Date: 24.12.2024.

SSE/STR/EW/SBI

Sub: Approval of QAP & WPSS for fabrication of 12.2m welded plate girder as per drawing no. RDSO/B-16014/R2 series.

Ref.: SSE/STR/EW/SBI's letter No. STR/Inspection Dt. 21.12.2024.

***

With reference to above, QAP & WPSS for fabrication of 12.2m welded plate girder as per drawing no. RDSO/B-16014/R2 series have been approved by competent authority.

DA:- QAP & WPSS.

AWM/EW/SBI
For CWM (EWS)/ADI

C/- Dy.CE/EW/SBI:- For kind information please.
C/- ACMT/QC Lab: - For kind information.

पश्चिम रेलवे

सीसेइंजी(संरचना) का कार्यालय
इंजीनियरी कारखाना, साबरमती
दिनाँक : 21.12.2024

संख्या : STR/Inspection

AWM (FIU) EW, SBI

विषय : 12.2m WPG – Drawing no. RDSO/B-16014/R2 to 16014/5R2 का QAP & WPSS का अनुमोदन के संबंध में।

संदर्भ : कार्यादेश संख्या 67971372

उपरोक्त विषय के संदर्भ में लेख है कि 12.2m WPG – Drawing no. RDSO/B-16014/R2 to 16014/5R2 के अनुसार QAP & WPSS तैयार किए गए हैं एवं Competent Authority से हस्ताक्षर के उपरांत आपके पास अनुमोदन हेतु भेजी जा रही है।

संलग्न:- उपरोक्त QAP & WPSS

21/12/24

सीसेइंजी (संरचना) इंका साबरमती

MODEL QUALITY ASSURANCE PLAN (QAP) FOR FABRICATION OF WELDED PLATE I-GIRDER TYPE OF RDSO STANDARD DRAWINGS

PART-A (DETAILS OF WORK)

S.No.	Item	Details
1	Name of Project	Manufacturing and supplying of 12.2M Span Welded Plate Girder including Bearing Plates and all complete with metalizing of Girder with RDSO Drg. No. RDSO/B-16014/R2 Series.
2	Project falls into Zonal Railway jurisdiction of	Western Railway
3	Executing organization of the agreement (i.e. Zonal Railway/ Railway PSU/NHAI or any other government agency)	Bridge Organization
4	Contractor Agency (Name and address)	Nil
5	Fabricating Agency (Name and address)	Engineering Workshop, Kaligam, Sabarmati
6	Inspecting Agency	FIU/EW-SBI
7	QAP No.	SBI/WPG/12.2M/25T/R2
8	Agreement No./LOA No.	Nil
9	Date of Agreement/LOA	Nil
10	Completion date as per Agreement/LOA	Nil
11	Scope of fabrication (in no. of spans and tonnage)	04 Spans- 59.5 MTs
12	Applicable RDSO Drawing No.	RDSO/B-16014/R2 Series
13	Any other relevant detail	W.O.No.- 67971372

Prepared By.
SSE/FAB/STR

जाँचा एवं सही पाया गया।
Checked & found in order.
CMS/(EW)SBI

ACMT(EW)SBI 20/12/24

Sectional Authority
Dy. CE (EW)SBI

Approved by
स.का.प्र.-इं.का, साबरमती
AWM-EW, Sabarmati

Quality Assurance Plan

12.2M Span Welded Plate Girder-Drg. No. RDSO/B-16014/R2 Series

FABRICATOR: Chief Works Manager,
Engineering Workshop, Kaligam,
Sabarmati, Western Railway

PART B - MODEL QAP

Sl. No.	Component / Operations	Characteristic to be checked	Frequency & type of check	Reference Document	Fabricators Quality Control	Inspection Details		Type of record	Acceptance Criteria	Remarks
						Inspecting agency	Extent of Inspection			
1	2	3	4	5	6	7	8	9	10	11
1.0	**RAW MATERIAL**									
1.1	**Steel Plates and other Structural Steel Section**	Identification and Co- relation with Mill Test Certificate from Supplier. Source / Brand of steel to be decided as per prevailing instructions issued from Railway Board.	As per Mill Test Certificate & test required by Inspection Agency from approved Laboratory**.	Challan, Mill T.C.	Verification of reference documents	LAB/EW/SBI	100%	Fabricator's Record	1) Steel Plates: IS 2062:2011 Grade E250, Quality B0 as mentioned in the respective approved drawing. 2) Plates 12mm and above thick, Plates are fully killed/normalized or control cooled. 3) Rolled Sections or any other structural steel member: IS 2062:2011 Grade E250, Quality B0 as mentioned in the respective approved drawing.	1. Grade and Quality of Steel Plates, structural section to be same as mentioned in the respective approved drawings 2. For other details of structural steel plates and structural section A&C no. 5 of IRS-B1: 2001, IS 2062-2011 and codes referred in these shall be complied as applicable. 3. Raw Material clearance shall be done by an authority as mentioned under clause 8.6 of these guidelines.

जांचा एवं सही पाया गया।
Checked & found in order.

Prepared By.
SSE/FAB/STR

CMS/(EW)SBI

ACMT(EW)SBI

Sectional Authority
Dy. CE (EW)SBI

Approved by
स.का.प्र.-इं.का, साबरमती
AWM-EW, Sabarmati

Sl. No.	Component / Operations	Characteristic to be checked	Frequency & type of check	Reference Document	Fabricators Quality Control	Inspection Details		Type of record	Acceptance Criteria	Remarks
						Inspecting agency	Extent of Inspection			
1	2	3	4	5	6	7	8	9	10	11
										4. Material produced by re-rolling finished products (virgin or used or scrap), or by rolling material for which the metallurgical history is not fully documented or not known, are not acceptable. Since the starting material for re-rollers is mostly billets, ingots, it has to be ISI marked as per IS 2830.
		Physical Condition i.e.- Pitting, rusting, straightness ,rolling defects etc.	Visual	–	Complete Visual Inspection	STR-EW/SBI	100%	Fabricator's Record	A&C no. 5 of IRS-B1: 2001, IS 2062-2011 and codes referred in these shall be complied as applicable	
		Mechanical Test as per IS-2062:2011 UTS,YS,%EL, Bend Test	Lab test at approved laboratory**	-	Lab Test Report	LAB-EW/SBI	-	-	Table 2 along with notes below and other relevant clauses of IS- 2062-2011 and codes referred in it, for quality and grade of steel as mentioned in respective drawings as applicable.	

जाँचा एवं सही पाया गया।

Prepared By. SSE/FAB/STR

Checked & found in order. CMS/(EW)SBI

ACMT(EW)SBI

Sectional Authority Dy. CE (EW)SBI

Approved by

स.का.प्र.-इं.का, साबरमती
AWM-EW, Sabarmati

Sl. No.	Component / Operations	Characteristic to be checked	Frequency & type of check	Reference Document	Fabricators Quality Control	Inspection Details		Type of record	Acceptance Criteria	Remarks
						Inspecting agency	Extent of Inspection			
1	2	3	4	5	6	7	8	9	10	11
		Chemical Analysis as per IS 2062-2011	Lab test at approved laboratory**	-	Lab Test Report	**LAB-EW/SBI**	Heat / Cast no section wise as per IS 2062-2011	-	Table 1 along with notes below and other relevant clauses of IS- 2062-2011 and codes referred in it, for quality and grade of steel as mentioned in respective drawings as applicable.	
		Ultra sonic test for 12mm and above thick plates as per IS-4225/ASTM SA-435/435M	By ASN level- II operator	-	Lab Test Report	**LAB-EW/SBI**	100%	-	IS-4225 or ASTM SA-435/435M and codes referred in it as per applicability	
		Dimension	Measurement	Challan	Measurement of dimension	**STR-EW/SBI**	100%	Fabricator's Record & Inspection Agency record	IS 2062: 2011 or other relevant codes referred in it as applicable	

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1	2	3	4	5	6	7	8	9	10	11
1.2	**HSFG Bolting Assemblies with DTI washers**	Dimensions	Visual / Measurement	Challan and Manufacturer's Test Certificate	Verification of reference Documents	**STR-EW/SBI**	As per A&C no. 11 of IRS B1-2001 and relevant EN 14399 series codes referred in it	Fabricator's Record	1. HSFG bolting assemblies shall meet the criterion not only for individual components such as bolts, nut, washers and DTI washers as mentioned in relevant EN 14399 codes but also meet the criterion for full HSFG bolting assembly along with DTI washers so that designed preload is achieved in HSFG bolting assembly when tightened properly.	1. Only HSFG Bolting assemblies with DTI washers as per the A&C no. 11 of IRS B1-2001 and BS Report no. 111 (Rev. 6) and relevant EN 14399 series codes referred in these are to be used. 2.HSFG Bolting assemblies is to be procured from RDSO approved vendors only 3. Test at the approved laboratory suitable for the purpose shall be done as per the instruction of the inspecting agency which is responsible for passing of the material
		Mechanical & Chemical properties	Lab Test at approved laboratory**.	Manufacturer Test Certificate	Verification of reference Documents	**LAB-EW/SBI**				
1.3	**Paints and Primers**	Verification of Manufacturer's Test Certificate, Inspection Certificate, Challan	Visual	Challan , Manufacture's Test Certificate	Verification of Reference Documents	**LAB-EW/SBI**	Each Batch	Manufacture's Test Certificate	IRS B1-2001, IS:51, IS:104, IS:2339, IS:5666 and applicable codes referred in these codes	1. Paints to be procured from vendors approved by RDSO. 2.Test at the approved

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1	2	3	4	5	6	7	8	9	10	11
		Tests as per specification	Lab Test at approved laboratory**.	Challan , Manufacture's Test Certificate	Verification of Reference Documents		Random	Lab Test Report		Laboratory suitable for the purpose shall be done as per the instruction of the inspecting agency which is responsible for passing of the material.
1.4	**Aluminium wire**	Properties of Aluminium wire such as Dia, class and purity as mentioned in appendix-VII of IRS B1-2001	Review of reference documents with material	Challan , Manufacture's Test Certificate	Verification of Reference Documents	**LAB-EW/SBI**	Each Batch	Manufacture's Test Certificate	IRS B1-2001, IS:2590 and applicable codes referred in these codes	Test at the approved laboratory suitable for the purpose shall be done as per the instruction of the inspecting agency which is responsible for passing of the material.
		Tests as per specification	Lab Test at approved laboratory**.	Challan , Manufacture's Test Certificate	Verification of Reference Documents		Random	Lab Test Report		
1.5	**Welding Consumables**	As Per Specification and as approved by RDSO	Any Test as required	Challan& Manufacturer's Test Certificate	Verification of reference Documents	**LAB-EW/SBI**	As per requirement	Fabricator's record	IRS Welded Bridge Code 2001, IRS M28, IRS M39, IRS M46 and other applicable codes referred in these codes and specifications	Consumable should be of RDSO approved Brand/Vendors.

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						Inspecting agency	Extent of Inspection			
1	2	3	4	5	6	7	8	9	10	11
1.6	Stud	1. Identification and co-relation with Manufacturer's test certificate. 2. Physical Condition of material- Pitting, Rusting, Straightness, dimensions or any defect and cracks. 3. Dimensions of Stud.	Visual and dimension verification	Challan& Manufacturer's Test Certificate	Verification of reference Documents	NA	Random	Fabricator's record	BS Report no. BS-115 (Revision 1), ISO 13918 and applicable codes referred in these codes and guidelines.	1. Material should be as per SD1 of ISO 13918 2. Manufacture's ID should be embossed in every piece 3. Test at the approved laboratory suitable for the purpose shall be done as per the instruction of the inspecting agency which is responsible for passing of the material.
		Chemical and Mechanical properties	Lab Test at approved laboratory**	Challan& Manufacturer's Test Certificate	Verification of reference Documents		Random	Lab Test Report		

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						Inspecting agency	Extent of Inspection			
1	2	3	4	5	6	7	8	9	10	11
2.0	Manufacturing Process									
2.1	Layout of Components, Joints, Cross frame, diaphragm and any other member as applicable.	Dimension	Measurement with calibrated steel Tape.	Approved Drawings	Measurement of dimensions	FIU-SBI	100%	Inspection Report of Inspection officials	Approved fabrication Drawings# and relevant IS/IRS/IRC codes.	Clearance by Inspecting agency with the help of Master Plates if required.
2.2	Preparatory work such as Cutting, Straightening, Edge Preparation, Marking, Drilling, Fit up, Pre-assembly, End finishing.	Dimension , freedom from defects	Visual / Measurement with calibrated steel tape, gauges, templates etc.	Inspection Report of Inspection officials & fabricator's record	Visual & Measurement of dimensions	STR-EW/SBI	100%	Inspection Report of Inspection officials & fabricator's record	Approved fabrication drawings#, IRS B1-2001, IS- 1852-85 and codes referred in these codes as applicable	–

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						Inspecting agency	Extent of Inspection			
1	2	3	4	5	6	7	8	9	10	11
3.0	Welding									
3.1	WPSS	Review of WPSS	Verification	IS 9595-96, IRS B1-2001, IRS WBC-2001 and codes referred in these codes as applicable.	Verification of Reference Documents	LAB-EW/SBI ~~and FIU-SBI~~	100%	Fabricator's Record	Approved fabrication Drawings#, IS 9595-96, IRS B1-2001, IRS WBC-2001 and codes referred in these codes as applicable. Instructions issued by Railway Board also to be followed.	1. Welding to be performed following the different specification and parameters mentioned in WPSS approved by Inspecting Agency. 2. For details of Stud Welding refer BS 115 (Revision 1).

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1	2	3	4	5	6	7	8	9	10	11
3.2	**WPQR**	1. Witnessing of established WPSS. 2. Witnessing of Welder Qualification test	Visual ,DT and NDT at approved laboratory**	As per Codal Requirement	Verification of Reference Documents	**LAB-EW/SBI ~~and FIU-SBI~~**	100%	WPQR Sheet to be recorded in presence of Inspecting agency	IS 7307 (Part-1), IS 7310 (Part-1), IRS B1-2001, IRS WBC-2001 and codes referred in these codes as applicable	1.Only Inspecting Agency certified welders to be engaged in the job. 2. For Details of Stud Welding refer BS 115 (Revision 1) 3. ~~WPQR sheets should be signed by fabricator and concerned officials (not below JA grade) of executing agency~~
3.3	**Preheating**	Measurement of Temperature	Visual with thermal Chalk or Infrared Thermometer	Approved WPSS	Verification of Reference Documents	**STR-EW/SBI**	Random	Inspection Report of Inspection officials & fabricator's record	IS 9595-96, IRS B1-2001, IRS WBC-2001 and codes referred in these codes as applicable	--
3.4	**Baking of Electrode, flux**	To have moisture free electrode and flux	Visual check of Electrodes and heating	As per Manufacture's Recommendation	Verification of Reference Documents	**STR-EW/SBI**	100%	Inspection Report of Inspection officials & fabricator's record	IRS B1-2001	--

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1	2	3	4	5	6	7	8	9	10	11
3.5	Selection of Correct Electrodes & flux	Reference to WPSS, IRS class etc.	Visual	As per Approved WPSS	Verification of Reference Documents	STR-EW/SBI	100%	Inspection Report of Inspection officials & fabricator's record	IRS Welded Bridge Code 2001, IRS M28, IRS M39, IRS M46 and other applicable codes referred in these codes and specifications	Refer Para 1.5 of this QAP
3.7	Current Condition	Measurement of Amp./Voltage	Visual with Ammeter and Voltmeter	As per Approved WPSS	Verification of Reference Documents	STR-EW/SBI	Random	Inspection Report of Inspection officials & fabricator's record	IS 9595-96, IRS B1-2001, IRS WBC-2001 and codes referred in these codes as applicable	--
3.8	Sequence of Welding	Controlling Distortion	Visual	As per Approved WPSS	Verification Reference Documents	STR-EW/SBI	Random	Inspection Report of Inspection officials & fabricator's record	IS 9595-96, IRS B1-2001, IRS WBC-2001 and codes referred in these codes as applicable	--
3.9	Provision of Run-on and Run-off Plates	To avoid crater defects	Visual	As per Approved WPSS	Verification Reference Documents	STR-EW/SBI	100%	Inspection Report of Inspection officials & fabricator's record	IS 9595-96, IRS B1-2001, IRS WBC-2001 and codes referred in these codes as applicable	--

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1	2	3	4	5	6	7	8	9	10	11
4.0	**Inspection of Welding**	**For Fillet Welds-** Visual, D.P. Test, Fillet Size, Penetration, Leg length, Throat thickness etc.	Visual, Gauge and Macro etching	Approved fabrication Drawings# & WPSS	Visual Inspection & Verification of Dimension by Gauge	**LAB-EW/SBI**	100%	Fabricator's Record (for Dye penetration test & Macro etching)	Approved fabrication Drawings#, IRS B1-2001, IRS WBC-2001 and codes referred in these codes as applicable	1. Clearance by Inspecting agency. 2. It is to be ensured during fabrication process that fabrication has been done as per the WPSS approved by Inspecting agency and Welders approved by inspecting agency.
5.0	**Stud welding**	NA	NA	NA	NA	NA	NA	NA	NA	NA

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1	2	3	4	5	6	7	8	9	10	11
6.0	First span Inspection									
6.1	Trial Assembly	a) Overall length b) Bearing centers c) Height d) Girder centers e) Squareness f) Verticality g) Camber on Jack h) Dead Load deflection (Camber without Jack) i) Dimension j) Fairness of Holes k) Temporary fasteners l) Any Infringement m) Butting of compression flanges	Visual & Dimensional	Approved Drawings	Complete Dimension al Check of Trial Assembly	FIU-SBI	First span	Inspection Report of Inspection officials & fabricator's record	IRS B1-2001, IRS WBC-2001 and applicable codes referred in these codes.	1. Clearance by Inspecting agency 2. Trial assembly shall be done in Workshop of fabricator only. Fabricator shall ensure that sufficient space is available in workshop for trial assembly before finalizing the order of fabrication for a particular span.
6.2	Dismantled component inspection	1. Component completeness after dismantling, 2. To find out that dismantled components are free from Elongation of holes, Tearing of edges or other defects.	Visual, Dimensional & Structural	Stage clearance Record	Verification of Stage clearance Record	FIU-SBI	100%	Inspection Report of Inspection officials & fabricator's record	IRS B1-2001, IRS WBC-2001 and applicable codes referred in these codes.	Clearance to be given by inspecting agency including the clearance for welding as per Annexure 2.

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						Inspecting agency	Extent of Inspection			
1	2	3	4	5	6	7	8	9	10	11
7.0	**Inspection of Components- 2nd span and onwards**	a) Component completeness b) Dimensions c) Fairness of holes d) Verticality e) Butting of compression flange f) Squareness g) Overall length h) Height	Visual, Dimensional & Structural	Stage clearance Record	Verification of Stage clearance Record	**FIU-SBI**	100%	Inspection Report of Inspection officials & fabricator's record	IRS B1-2001, IRS WBC-2001 and applicable codes referred in these codes.	1. Clearance to be given as per Annexure -2. 2. 2nd span and onwards, each girder to be offered in leaf assembled condition. 3. Full Components of one span or more than one span shall be offered for inspection of inspecting agency. Part spans should not be offered for inspection of inspecting agency.
8.0	**Surface Preparation by Shot Blasting & Metalizing**	Surface condition after blasting	Visual checking with reference to surface preparation	Approved Fabrication Drawing# & IRS - B1-2001 and codes referred in these	Verification of Stage clearance Record	**STR-EW/SBI**	100% by fabricator & Random by ~~FIU-SBI~~	Fabricator's Record	IRS B1-2001 Appendix- VII IS: 6586, IS:5905 , IS:2590 and codes referred in these codes	1. Clearance shall be given as per Annexure 2 2. No need for metalizing and painting on top side of I-Beam before welding of Stud Shear Connector 3. If required for corrosion protection, the steel surface duly fitted with studs shall be aluminum metallized after welding of studs and their inspection is over. However, the same shall not be painted (Please refer BS 115 Rev. 1)
		Surface finish after metalizing	Visual checking	Approved Fabrication Drawing# & IRS - B1-2001 and codes referred in these	Verification of Stage clearance Record	**STR-EW/SBI**	100% by fabricator & Random by ~~FIU-SBI~~	Fabricator's Record		

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						Inspecting agency	Extent of Inspection			
1	2	3	4	5	6	7	8	9	10	11
		DFT checking	Measurement	Approved Fabrication Drawing# & IRS - B1-2001 and codes referred in these	Verification of Stage clearance Record	STR-EW/SBI	Minimum one reading per square meter	Measurement Record		
9.0	Cleaning & Painting	Surface condition before painting	Visual checking with reference to surface preparation	Approved Fabrication Drawing# & IRS - B1-2001 and codes referred in these	Verification of stage clearance records	STR-EW/SBI	100% by fabricator & Random by ~~FIU-SBI~~	Fabricator's Record	Clause 39.2.1 and appendix VII of IRS B1-2001, IS: 104, IS:51, IS: 2339, IS: 5666, BS-111 and applicable codes referred in these codes	
		Surface finish after painting	Visual checking	Approved Fabrication Drawing# & IRS - B1-2001 and codes referred in these	Verification of stage clearance records	STR-EW/SBI	100% by fabricator & Random by ~~FIU-SBI~~	Fabricator's Record		
		DFT checking	Measurement	Approved Fabrication Drawing# & IRS - B1-2001 and codes referred in these	Verification of stage clearance records	STR-EW/SBI	Minimum one reading per square meter	Measurement Record		

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1	2	3	4	5	6	7	8	9	10	11
10.0	**Final Dispatch including packing, Shipping mark and loading etc.**	1. Shipping Mark on all Components as per Approved Fabrication drawings#. 2. Fixing of Inscription Plate 3. Packing 4. Loading	Visual	Fabricator's Record		**STR-EW/SBI**	Random	Approved Fabrication Drawing# & Fabricator's record	Approved Fabrication Drawing# & Clause 42, 43 and 44 of IRS - B1-2001 and codes referred in these	Site Painting is to be done after assembly and erection of girder on site as per IRS B1-2001 Test check of assembly / camber at site before and after launching will be done by **sectional Rly. Authority i.e. Bridge unit WR** (As per annexure 2 of BS-130)

Notes:

1 * Inspection Agency as decided vide guidelines and Annexure -2 of BS-130.

2 ** Approved laboratory in this QAP means NABL/NABCB Accredited Lab. (Ref: ED/B&S/RDSO letter CBS/PBEJ/Reg. dated 10.07.2017.)

3 # "Fabrication drawings" shall be made on the basis of approved structural drawing if required as per the provisions of para 1.2 of IRS B1-2001. Fabrication work is to be undertaken on the basis of these fabrication drawings only after approval of Engineer in charge of project. Also on the completion of work, contractor should supply the "Completion Drawing" along with alteration if any.

4 All fabricator record/register as per approved QAP are to be duly signed by the representatives of Project executing agency as well as fabricator.

5 On completion of the work, all the fabrication related record / register must be preserved by Project executing agency for future reference.

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WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING PROCEDURE SPECIFICATION SHEET No.: SBI/WPG/12.2M /25T/R2/1

WELD JOINT DESCRIPTION: Tack welding of all members for 12.2M Welded plate girder – 25T loading -2008

DRAWING No. : RDSO/B -16014/R2 to RDSO/B -16014/5R2 & RDSO/B -11760/R1

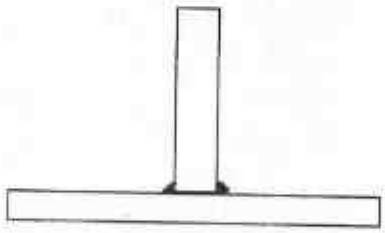
BASE METAL & its PREPARATION: I.S.: 2062-2011 Gr. B0 (FK+FN) Base metal thickness (xxxxxxx). Material to be cut straight and square by controlled gas cutting. The edges of the plates shall be ground after oxy-cutting. All surfaces to be welded surrounding areas for distance of 50mm on either side are to be cleaned and made free from scale, dirt, grease, paint, rust or any other surface deposits before welding.

WELDING PROCESS: MMAW

WELDING QUALIFICATION: As per IS:7310 Pt.I: 2019

WELDING POSITION : Horizontal & Vertical

WELDING CURRENT : 1. TYPE:- AC
2. POLARITY:- NA

JOINT DESIGN DETAILS	WELDING SEQUENCE & DIRECTION
50MM Tack Weld @ 300MM from adjoining Tack Weld	

WELDING CONSUMABLES:

ELECTRODES	FLUX COATED	FLUX	
DIA.	5 MM Electrode	TYPE	N.A.
CLASS	IRS M-28/A-2	CLASS	N.A.
DRYNIG METHOD	Welding electrodes to be dried at least for one hour daily prior to use, in drying oven at 150degree C or in accordance with the condition detailed by manufacture.		
SHEILDING GAS	N.A.		

WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING EQUIPMENT:-Welding to be done using A.C. transformer of capacity 300A.

WELDING PARAMITERS:-

Weld Pass	Electrode (mm)	Current (Amp)	Arc Voltage(V)	Wire Feed (m/min)	Travel speed (cm/min)	Elec. Stick Out (mm)	Gas Flow Rate(L/min)
1	05mm	200	80	NA	NA	NA	NA
2	05mm	200	80	NA	NA	NA	NA

PROVISIONS OF RUN IN & RUN OFF TABS:- NO	PEENING:- NA
CLEANIG OF WELD BEADS BEFORE NEXT BEAD:- NO	POST PREPARATION FOR WELDING :-NA
PRE-HEAT TEMP :- NA	ROOT PREPARATION FOR WELDING OTHER SIDE OF GROOVE WELD:-NA
INTER PASS TEMP:- NA	
RECTIFICATION OF WELD DEFECTS:- Defective weld to be gauged out cleaned & re-welded as per provisions made in IS : 9595-1996 Para 31.	INSPECTION VISUAL:- YES WELD GAUGE:- NO RADIOGRAPY :- NO DYE PENETRATION :- NO MAGNETIC PARTICLE :- NO ULTRASONIC:- NO
ANY OTHER RELEVENT DETAILS:- 1. Developed as per Para 5.2 of IS: 7307 Pt.I 2. WPSS No. SBI/WPG/12.2M /25T/1 3. Approved by FIU-SBI vide Letter No. FIU/EW/SBI dated 14.12.2020	ACCEPTANCE LEVEL: - 1. IS:7307 Pt.I 2. IRS-W.B.C. 3. IRS-B-1
SAW Shop:- STR Shop SIGNATURE:- DESIGNATION:- SSE/Fab. DATE:- 16/11/24	LABORATORY SHOP :- जाँचा एवं सही पाया गया। CMS(EW)SBI
FABRICATOR SIGNATURE - Dy.CE(EW)SBI	CHECKED BY :- ACMT (EW) SBI

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WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING PROCEDURE SPECIFICATION SHEET No.: SBI/WPG/12.2M /25T/R2/2

WELD JOINT DESCRIPTION: Fillet welding of Web plate to top flange plate & Web plate to Bottom flange plate of main girder for 12.2M welded plate girder 25T loading -2008.

DRAWING No. : RDSO/B -16014/R2 to RDSO/B -16014/5R2 & RDSO/B -11760/R1

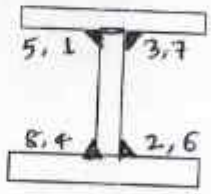
BASE METAL & its PREPARATION: I.S.: 2062-2011 Gr. B0 (FK+FN) Base metal thickness (xxxxxxx). Material to be cut straight and square by controlled gas cutting. The edges of the plates shall be ground after oxy-cutting. All surfaces to be welded surrounding areas for distance of 50mm on either side are to be cleaned and made free from scale, dirt, grease, paint, rust or any other surface deposits before welding.

WELDING PROCESS: SAW

WELDING QUALIFICATION: As per IS: 7310 Pt.I : 2019

WELDING POSITION: Flat (tilt at 45°)

WELDING CURRENT:
1. TYPE:- DC
2. POLARITY:- REVERSE

JOINT DESIGN DETAILS	WELDING SEQUENCE & DIRECTION
Fillet welding of Web plate to top flange plate & Web plate to Bottom flange plate	28 MM Th. Top flange plate  16MM thick Web Plate 40 MM Th. Bottom flange plate **Weld Size 14 MM**

WELDING CONSUMABLES:

ELECTRODES	Copper Coated Wire	FLUX	
DIA.	4 MM Wire	TYPE	Agglomerated
CLASS	IRS M-39/W-1	CLASS	IRS M-39/F-1
DRYNIG METHOD	Agglomerated flux to be dried at least for one hour daily prior to use, in drying oven at 250degree C or in accordance with the condition detailed by manufacture.		
SHEILDING GAS	N.A.		

WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING EQUIPMENT:-Welding to be done using D.C. transformer of capacity 1200A.

WELDING PARAMITERS:-

Weld Pass	Electrode/Wire Dia (mm)	Current (Amp)	Arc Voltage(V)	Wire Feed (m/min)	Travel speed (m/min)	Elec. Stick Out (mm)	Gas Flow Rate(L/min)
1	4	500-600	30-34	1.5	34-46	25	NA
2	4	500-600	30-34	1.5	34-46	25	NA
3,7	4	600-800	32-36	1.6	27-37	25	NA
6,8	4	600-800	32-36	1.6	27-37	25	NA

PROVISIONS OF RUN IN & RUN OFF TABS:- YES	PEENING:- NA
CLEANIG OF WELD BEADS BEFORE NEXT BEAD:- NA	POST PREPARATION FOR WELDING :-NA
PRE-HEAT TEMP :- NA	ROOT PREPARATION FOR WELDING OTHER SIDE OF GROOVE WELD:-NA
INTER PASS TEMP:- NA	
RECTIFICATION OF WELD DEFECTS:- Defective weld to be gauged out cleaned & rewelded as per provisions made in IS : 9595-1996 Para 31.	INSPECTION VISUAL:- YES WELD GAUGE:- YES RADIOGRAPY :- NO DYE PENETRATION :-YES MACRO ETCHING :- YES ULTRASONIC:- NO
ANY OTHER RELEVENT DETAILS:- 1. Developed as per Para 5.2 of IS: 7307 Pt.I 2. WPSS No. SBI/WPG/12.2M /25T/2 3. Approved by FIU-SBI vide Letter No. FIU/EW/SBI dated 14.12.2020	ACCEPTANCE LEVEL: - 1. IS:7307 Pt.I 2. IRS-W.B.C. 3. IRS-B-1
SAW Shop:- STR Shop SIGNATURE:- DESIGNATION:- SSE/Fab. DATE:- 16/11/24	LABORATORY SHOP जोंचा एवं सही पाया गया। CMS(EW)SBI
FABRICATOR SIGNATURE - Dy.CE (EW)SBI	CHECKED BY :- ACMT (EW) SBI

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WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING PROCEDURE SPECIFICATION SHEET No.: SBI/WPG/12.2M /25T/R2/3

WELD JOINT DESCRIPTION: Fillet welding of Web plate to top flange plate & Web plate of Bottom flange plate of End Diaphragm for 12.2M welded plate girder 25T loading -2008.

DRAWING No. : RDSO/B -16014/R2 to RDSO/B -16014/5R2 & RDSO/B -11760/R1

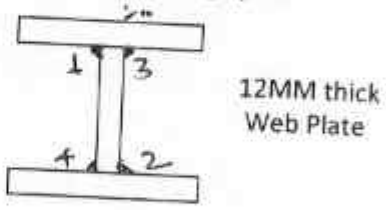
BASE METAL & its PREPARATION: I.S.: 2062-2011 Gr. B0 (FK+FNT)Base metal thickness (xxxxxxx). Material to be cut straight and square by controlled gas cutting. The edges of the plates shall be ground after oxy-cutting. All surfaces to be welded surrounding areas for distance of 50mm on either side are to be cleaned and made free from scale, dirt, grease, paint, rust or any other surface deposits before welding.

WELDING PROCESS: SAW

WELDING QUALIFICATION: As per IS: 7310 Pt.I : 2019

WELDING POSITION: Flat (tilt at 45°)

WELDING CURRENT:
1. TYPE:- DC
2. POLARITY: REVERSE

JOINT DESIGN DETAILS	WELDING SEQUENCE & DIRECTION
Fillet welding of Web plate to top flange plate & Web plate to Bottom flange plate of End Diaphragm	12 MM Th. Top flange plate  12 MM Th. Bottom flange plate **Weld Size 06 MM**

WELDING CONSUMABLES:

ELECTRODES	Copper Coated Wire	FLUX	
DIA.	4 MM Wire	TYPE	Agglomerated
CLASS	IRS M-39/W-1	CLASS	IRS M-39/F-1
DRYNIG METHOD	Agglomerated flux to be dried at least for one hour daily prior to use, in drying oven at 250degree C or in accordance with the condition detailed by manufacture.		
SHEILDING GAS	N.A.		

WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING EQUIPMENT:-Welding to be done using D.C. transformer of capacity 1200A.

WELDING PARAMITERS:-

Weld Pass	Electrode/Wire Dia (mm)	Current (Amp)	Arc Voltage(V)	Wire Feed (m/min)	Travel speed (m/min)	Elec. Stick Out (mm)	Gas Flow Rate(L/min)
1	4	500-600	30-34	1.5	34-46	25	NA
2	4	500-600	30-34	1.5	34-46	25	NA
3	4	500-600	30-34	1.5	34-46	25	NA
4	4	500-600	30-34	1.5	34-46	25	NA

CMS/PCL

PROVISIONS OF RUN IN & RUN OFF TABS:- YES	PEENING:- NA
CLEANIG OF WELD BEADS BEFORE NEXT BEAD:- NA	POST PREPARATION FOR WELDING :-NA
PRE-HEAT TEMP :- NA	ROOT PREPARATION FOR WELDING OTHER SIDE OF GROOVE WELD:-NA
INTER PASS TEMP:- NA	
RECTIFICATION OF WELD DEFECTS:- Defective weld to be gauged out cleaned & rewelded as per provisions made in IS: 9595-1996 Para 31.	INSPECTION VISUAL:- YES WELD GAUGE:- YES RADIOGRAPY :- NO DYE PENETRATION :-YES MACRO ETCHING :- YES ULTRASONIC:- NO
ANY OTHER RELEVENT DETAILS:- 1. Developed as per Para 5.2 of IS: 7307 Pt.I 2. WPSS No. SBI/WPG/12.2M /25T/3 3. Approved by FIU-SBI vide Letter No. FIU/EW/SBI dated 14.12.2020	ACCEPTANCE LEVEL: - 1. IS:7307 Pt.I 2. IRS-W.B.C. 3. IRS-B-1
SAW Shop:- STR Shop SIGNATURE:- DESIGNATION:- SSE/Fab DATE:- 16/11/24	LABORATORY SHOP : जाँचा एवं सही पाया गया। Rakeshkumar CMS(EW)SBI
FABRICATOR SIGNATURE - Dy.CE (EW)SBI	CHECKED BY:- 20/11/24 ACMT (EW) SBI

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WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING PROCEDURE SPECIFICATION SHEET No.: SBI/WPG/12.2M /25T/R2/4

WELD JOINT DESCRIPTION: Fillet welding of End stiffener to Web plate & End Stiffener to Top and Bottom flange plate of main girder for 12.2M welded plate girder 25T loading -2008.

DRAWING No. : RDSO/B -16014/R2 to RDSO/B -16014/5R2 & RDSO/B -11760/R1

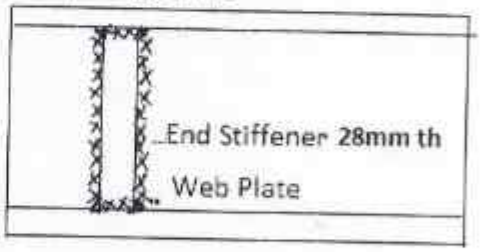
BASE METAL & its PREPARATION: I.S.: 2062-2011 Gr. B0 (FK+FN) Base metal thickness (xxxxxxx). Material to be cut straight and square by controlled gas cutting. The edges of the plates shall be ground after oxy-cutting. All surfaces to be welded surrounding areas for distance of 50mm on either side are to be cleaned and made free from scale, dirt, grease, paint, rust or any other surface deposits before welding.

WELDING PROCESS: GMAW

WELDING QUALIFICATION: As per IS: 7310 Pt.I : 2019

WELDING POSITION: Horizontal & Vertical

WELDING CURRENT:
1. TYPE:- DC
2. POLARITY:- REVERSE

JOINT DESIGN DETAILS	WELDING SEQUENCE & DIRECTION
Fillet welding of End stiffener to Web plate & End stiffener to Top and Bottom flange plate	Top flange plate  Bottom flange Plate **Weld size : 10 mm**

WELDING CONSUMABLES:

ELECTRODES	Copper Coated Wire	FLUX	
DIA.	1.2 MM Wire	TYPE	Agglomerated
CLASS	IRS FOR CO_2 WIRE-I	CLASS	IRS M-39/F-1
DRYNIG METHOD	N.A.		
SHEILDING GAS	CO_2 GAS (99.8% Pure) ABS DRY AND FREE FROM N_2 IS:307 Gr.I		

WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING EQUIPMENT:-Welding to be done using D.C. transformer of capacity 600A.

WELDING PARAMITERS:-

Weld Pass	Electrode/Wire Dia. (mm)	Current (Amp)	Arc Voltage(V)	Wire Feed (m/min)	Travel speed (m/min)	Elec. Stick Out (mm)	Gas Flow Rate(L/min)
1	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20
2	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20
3	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20
~~4~~	~~1.2~~	~~200-280~~	~~24-30~~	~~4.5-5.5~~	~~NA~~	~~15-20~~	~~15-20.~~

PROVISIONS OF RUN IN & RUN OFF TABS:- NO	PEENING:- NA
CLEANIG OF WELD BEADS BEFORE NEXT BEAD:- NO	POST PREPARATION FOR WELDING :-NA
PRE-HEAT TEMP :- NA INTER PASS TEMP:- NA	ROOT PREPARATION FOR WELDING OTHER SIDE OF GROOVE WELD:-NA
RECTIFICATION OF WELD DEFECTS:- Defective weld to be gauged out cleaned & rewelded as per provisions made in IS: 9595-1996 Para 31.	INSPECTION VISUAL:- YES WELD GAUGE:- YES RADIOGRAPY :- NO DYE PENETRATION :-YES MAGNETIC PARTICLE :- NO ULTRASONIC:- NO
ANY OTHER RELEVENT DETAILS:- 1. Developed as per Para 5.2 of IS: 7307 Pt.I 2. WPSS SBI/WPG/12.2M /25T/4 3. Approved by FIU-SBI vide Letter No. FIU/EW/SBI dated 14.12.2020	ACCEPTANCE LEVEL:- 1. IS:7307 Pt.I 2. IRS-W.B.C. 3. IRS-B-1
SAW Shop:- STR Shop SIGNATURE:- DESIGNATION:- SSE/Fab. DATE:- 16/11/24	LABORATORY SHOP :- जांचा एवं सही पाया गया। CMS(EW)SBI
FABRICATOR SIGNATURE - Dy.CE (EW)SBI	CHECKED BY :- 20/11/24 ACMT (EW) SBI

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WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING PROCEDURE SPECIFICATION SHEET No.: SBI/WPG/12.2M /25T/R2/5

WELD JOINT DESCRIPTION : Fillet welding of jack stiffener to Web plate of End Diaphragm for 12.2M welded plate girder 25T loading -2008.

DRAWING No. : RDSO/B -16014/R2 to RDSO/B -16014/5R2 & RDSO/B -11760/R1

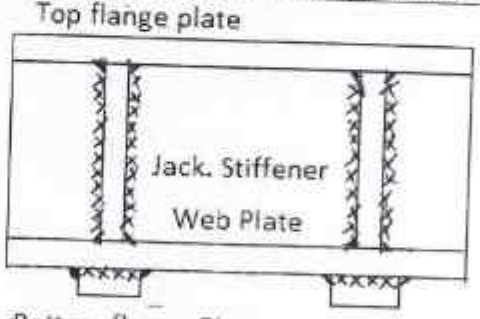
BASE METAL & its PREPARATION: I.S.: 2062-2011 Gr. B0 (FK+FN) Base metal thickness (xxxxxxx). Material to be cut straight and square by controlled gas cutting. The edges of the plates shall be ground after oxy-cutting. All surfaces to be welded surrounding areas for distance of 50mm on either side are to be cleaned and made free from scale, dirt, grease, paint, rust or any other surface deposits before welding.

WELDING PROCESS: GMAW

WELDING QUALIFICATION: As per IS: 7310 Pt.I : 2019

WELDING POSITION: Horizontal & Vertical

WELDING CURRENT: 1. TYPE:- DC
2. POLARITY:- REVERSE

JOINT DESIGN DETAILS	WELDING SEQUENCE & DIRECTION
Fillet welding of jack stiffener to Web plate of End Diaphragm and Inner flange plate, Corner flange plate, Side flange plate of Internal Diaphragm	 **Weld size : 06mm**

WELDING CONSUMABLES:

ELECTRODES	Copper Coated Wire	FLUX	
DIA.	1.2 MM Wire	TYPE	Agglomerated
CLASS	IRS FOR CO_2 WIRE-I	CLASS	IRS M-39/F-I
DRYNIG METHOD	N.A.		
SHEILDING GAS	CO_2 GAS (99.8% Pure) ABS DRY AND FREE FROM N_2 IS:307 Gr.I		

WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING EQUIPMENT:-Welding to be done using D.C. transformer of capacity 600A.

WELDING PARAMITERS:-

Weld Pass	Electrode/Wire Dia. (mm)	Current (Amp)	Arc Voltage(V)	Wire Feed (m/min)	Travel speed (m/min)	Elec. Stick Out (mm)	Gas Flow Rate(L/min)
1	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20
2	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20
3	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20
4	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20

PROVISIONS OF RUN IN & RUN OFF TABS:- NO	PEENING:- NA
CLEANIG OF WELD BEADS BEFORE NEXT BEAD:- NO	POST PREPARATION FOR WELDING :-NA
PRE-HEAT TEMP :- NA	ROOT PREPARATION FOR WELDING OTHER SIDE OF GROOVE WELD:-NA
INTER PASS TEMP:- NA	
RECTIFICATION OF WELD DEFECTS:- Defective weld to be gauged out cleaned & rewelded as per provisions made in IS : 9595-1996 Para 31.	INSPECTION VISUAL:- YES WELD GAUGE:- YES RADIOGRAPY :- NO DYE PENETRATION :-YES MAGNETIC PARTICLE :- NO ULTRASONIC:- NO
ANY OTHER RELEVENT DETAILS:- 1. Developed as per Para 5.2 of IS: 7307 Pt.I 2. WPSS SBI/WPG/12.2M /25T/5 3. Approved by FIU-SBI vide Letter No. FIU/EW/SBI dated 14.12.2020	ACCEPTANCE LEVEL: - 1. IS:7307 Pt.I 2. IRS-W.B.C. 3. IRS-B-1
SAW Shop:- STR Shop SIGNATURE:- DESIGNATION:- SSE/Fab DATE:- 16/11/24	LABORATORY SHOP :- जाँचा एवं सही पाया गया। CMS(EW)SBI
FABRICATOR SIGNATURE - Dy.CE (EW)SBI	CHECKED BY :- 20/11/24 ACMT (EW) SBI

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WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING PROCEDURE SPECIFICATION SHEET No.: SBI/WPG/12.2M/25T/R2/6

WELD JOINT DESCRIPTION: Fillet welding of Channel 150x75MM to 50MM thick Bed plate for 12.2M welded plate girder 25T loading -2008.

DRAWING No. : RDSO/B -16014/R2 to RDSO/B -16014/5R2 & RDSO/B -11760/R1

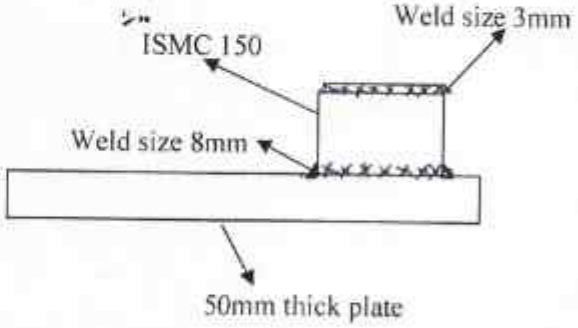
BASE METAL & its PREPARATION: I.S.: 2062-2011 Gr. B0 (FK+FN) Base metal thickness (xxxxxxx). Material to be cut straight and square by controlled gas cutting. The edges of the plates shall be ground after oxy-cutting. All surfaces to be welded surrounding areas for distance of 50mm on either side are to be cleaned and made free from scale, dirt, grease, paint, rust or any other surface deposits before welding.

WELDING PROCESS: GMAW

WELDING QUALIFICATION: As per IS:7310 Pt.I : 2019

WELDING POSITION: Horizontal & Vertical

WELDING CURRENT:
1. TYPE:- DC
2. POLARITY:- REVERSE

JOINT DESIGN DETAILS	WELDING SEQUENCE & DIRECTION
Fillet welding of Channel 150x75MM to 50MM thick Bed plate	 **Weld size : 8 mm**

WELDING CONSUMABLES:

ELECTRODES	Copper Coated Wire	FLUX	
DIA.	1.2 MM Wire	TYPE	Agglomerated
CLASS	IRS FOR CO_2 WIRE-1	CLASS	IRS M-39/F-1
DRYNIG METHOD	N.A.		
SHEILDING GAS	CO_2 GAS (99.8% Pure) ABS DRY AND FREE FROM N_2 IS:307 Gr.I		

WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKS MANAGERS (EWS) W.RLY, AHMEDABAD.

WELDING EQUIPMENT:-Welding to be done using D.C. transformer of capacity 600A.

WELDING PARAMITERS:-

Weld Pass	Electrode/Wire Dia. (mm)	Current (Amp)	Arc Voltage(V)	Wire Feed (m/min)	Travel speed (m/min)	Elec. Stick Out (mm)	Gas Flow Rate(L/min)
1	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20
2	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20
3	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20
4	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20

PROVISIONS OF RUN IN & RUN OFF TABS:- NO	PEENING:- NA
CLEANIG OF WELD BEADS BEFORE NEXT BEAD:- NO	POST PREPARATION FOR WELDING :-NA
PRE-HEAT TEMP :- NA	ROOT PREPARATION FOR WELDING OTHER SIDE OF GROOVE WELD:-NA
INTER PASS TEMP:- NA	
RECTIFICATION OF WELD DEFECTS:- Defective weld to be gauged out cleaned & rewelded as per provisions made in IS : 9595-1996 Para 31.	INSPECTION VISUAL:- YES WELD GAUGE:- YES RADIOGRAPY :- NO DYE PENETRATION :-YES MAGNETIC PARTICLE :- NO ULTRASONIC:- NO
ANY OTHER RELEVENT DETAILS:- 1. Developed as per Para 5.2 of IS: 7307 Pt.I 2. WPSS SBI/WPG/12.2M/25T/6 3. Approved by FIU-SBI vide Letter No. FIU/EW/SBI dated 14.12.2020	ACCEPTANCE LEVEL: - 1. IS:7307 Pt.I 2. IRS-W.B.C. 3. IRS-B-I
SAW Shop:- STR Shop SIGNATURE:- DESIGNATION:- SSE/Fab. DATE:- 16/11/24	LABORATORY SHOP :- जाँचा एवं सही पाया गया। Rakeshkumar Jatav CMS(EW)SBI
FABRICATOR SIGNATURE - Dy.CE (EW)SBI	CHECKED BY:- ACMT (EW) SBI 30/11/24

24/11/2024

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WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING PROCEDURE SPECIFICATION SHEET No.: SBI/WPG/12.2M/25T/R2/7

WELD JOINT DESCRIPTION: Fillet welding of Angle 75X75X10MM (Horizontal and Diagonal) to Gusset plate of 'X' frame for 12.2M welded plate girder 25T loading -2008.

DRAWING No. : RDSO/B -16014/R2 to RDSO/B -16014/5R2 & RDSO/B -11760/R1

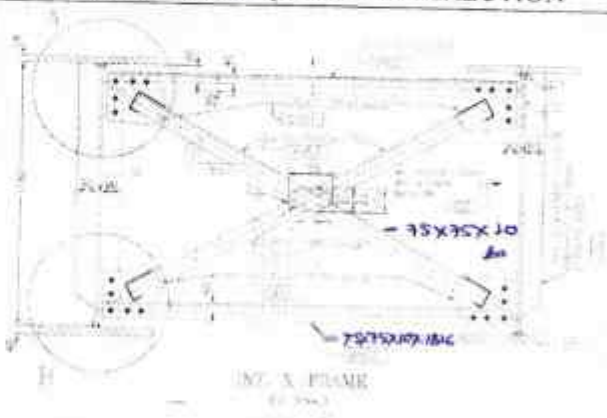
BASE METAL & its PREPARATION: I.S.: 2062-2011 Gr. B0 (FK+FN) Base metal thickness (xxxxxxx). Material to be cut straight and square by controlled gas cutting. The edges of the plates shall be ground after oxy-cutting. All surfaces to be welded surrounding areas for distance of 50mm on either side are to be cleaned and made free from scale, dirt, grease, paint, rust or any other surface deposits before welding.

WELDING PROCESS: GMAW

WELDING QUALIFICATION: As per IS : 7310 Pt.I : 2019

WELDING POSITION: Horizontal & Vertical

WELDING CURRENT:
1. TYPE:- DC
2. POLARITY:- REVERSE

JOINT DESIGN DETAILS	WELDING SEQUENCE & DIRECTION
Fillet welding of Angle 75X75X10MM (Horizontal and Diagonal) to Gusset plate of 'X' frame Gusset(GUS1) = 280 X12 X237 GUS2 = 278 X12 X236 GUS3 = 196 X12 X 203	 Weld size : 12mm

WELDING CONSUMABLES:

ELECTRODES	Copper Coated Wire	FLUX	
DIA.	1.2 MM Wire	TYPE	Agglomerated
CLASS	IRS FOR CO_2 WIRE-I	CLASS	IRS M-39/F-1
DRYNIG METHOD	N.A.		
SHEILDING GAS	CO_2 GAS (99.8% Pure) ABS DRY AND FREE FROM N_2 IS:307 Gr.I		

WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING EQUIPMENT:-Welding to be done using D.C. transformer of capacity 600A.

WELDING PARAMITERS:-

Weld Pass	Electrode/Wire Dia. (mm)	Current (Amp)	Arc Voltage(V)	Wire Feed (m/min)	Travel speed (m/min)	Elec. Stick Out (mm)	Gas Flow Rate(L/min)
1	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20
2,3	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20

PROVISIONS OF RUN IN & RUN OFF TABS:- NO	PEENING:- NA
CLEANIG OF WELD BEADS BEFORE NEXT BEAD:- NO	POST PREPARATION FOR WELDING :-NA
PRE-HEAT TEMP :- NA	ROOT PREPARATION FOR WELDING OTHER SIDE OF GROOVE WELD:-NA
INTER PASS TEMP:- NA	
RECTIFICATION OF WELD DEFECTS:- Defective weld to be gauged out cleaned & re-welded as per provisions made in IS : 9595-1996 Para 31.	INSPECTION VISUAL:- YES WELD GAUGE:- YES RADIOGRAPY :- NO DYE PENETRATION :-YES MAGNETIC PARTICLE :- NO ULTRASONIC:- NO
ANY OTHER RELEVENT DETAILS:- 1. Developed as per Para 5.2 of IS: 7307 Pt.I	ACCEPTANCE LEVEL: - 1. IS:7307 Pt.I 2. IRS-W.B.C. 3. IRS-B-1
SAW Shop:- STR Shop SIGNATURE:- DESIGNATION:- Sr.SE/Fab DATE:- 16/11/24	LABORATORY SHOP जाँचा एवं सही पाया गया। CMS(EW)SBI
FABRICATOR SIGNATURE – Dy.CE(EW)SBI	CHECKED BY :- 20/12/24 ACMT(EW)SBI

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WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING PROCEDURE SPECIFICATION SHEET No.: SBI/WPG/12.2M/25T/R2/8

WELD JOINT DESCRIPTION: Fillet welding of Int. stiffener to Web plate of main girder for 12.2M welded plate girder 25T loading -2008.

DRAWING No. : RDSO/B -16014/R2 to RDSO/B -16014/5R2 & RDSO/B -11760/R1

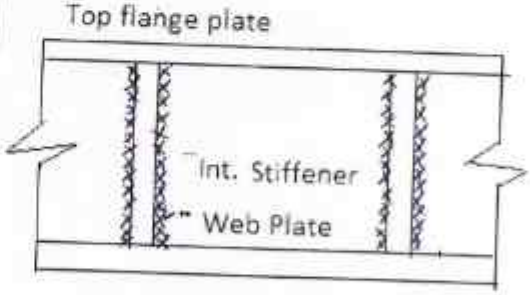
BASE METAL & its PREPARATION: I.S.: 2062-2011 Gr. B0 (FK+FN) Base metal thickness (xxxxxxx). Material to be cut straight and square by controlled gas cutting. The edges of the plates shall be ground after oxy-cutting. All surfaces to be welded surrounding areas for distance of 50mm on either side are to be cleaned and made free from scale, dirt, grease, paint, rust or any other surface deposits before welding.

WELDING PROCESS: GMAW

WELDING QUALIFICATION: As per IS : 7310 Pt.1 : 2019

WELDING POSITION: Horizontal & Vertical

WELDING CURRENT:
1. TYPE: DC
2. POLARITY: REVERSE

JOINT DESIGN DETAILS	WELDING SEQUENCE & DIRECTION
Fillet welding of Int. stiffener to Web plate of main girder	 **Weld size: 12mm**

WELDING CONSUMABLES:

ELECTRODES	Copper Coated Wire	FLUX	
DIA.	1.2 MM Wire	TYPE	Agglomerated
CLASS	IRS FOR CO_2 WIRE-I	CLASS	IRS M-39/F-1
DRYNIG METHOD	N.A.		
SHEILDING GAS	CO_2 GAS (99.8% Pure) ABS DRY AND FREE FROM N_2 IS:307 Gr.I		

WELDING PROCEDURE SPECIFICATION SHEET

FABRICATOR: CHIEF WORKSHOP MANAGER (EWS), W.RLY, AHMEDABAD.

WELDING EQUIPMENT: Welding to be done using D.C. transformer of capacity 600A.

WELDING PARAMITERS:

Weld Pass	Electrode/Wire Dia. (mm)	Current (Amp)	Arc Voltage(V)	Wire Feed (m/min)	Travel speed (m/min)	Elec. Stick Out (mm)	Gas Flow Rate(L/min)
1	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20
2,3	1.2	200-280	24-30	4.5-5.5	NA	15-20	15-20

PROVISIONS OF RUN IN & RUN OFF TABS: NO	PEENING: NA
CLEANIG OF WELD BEADS BEFORE NEXT BEAD: NO	POST PREPARATION FOR WELDING: NA
PRE-HEAT TEMP: NA	ROOT PREPARATION FOR WELDING OTHER SIDE OF GROOVE WELD: NA
INTER PASS TEMP: NA	
RECTIFICATION OF WELD DEFECTS: Defective weld to be gauged out cleaned & re-welded as per provisions made in IS: 9595-1996 Para 31.	INSPECTION VISUAL: YES WELD GAUGE: YES RADIOGRAPY: NO DYE PENETRATION: YES MAGNETIC PARTICLE:NO ULTRASONIC: NO
ANY OTHER RELEVENT DETAILS:- 1. Developed as per Para 5.2 of IS: 7307 Pt.I	ACCEPTANCE LEVEL: 1. IS:7307 Pt. I 2. IRS-W.B.C. 3. IRS-B-1
SAW Shop: STR Shop SIGNATURE: DESIGNATION: SSE/Fab DATE: 15/11/24	LABORATORY SHOP: जाँचा एवं सही पाया गया। CMS (EW) SBI
FABRICATOR SIGNATURE - Dy.CE(EW)SBI	CHECKED BY :- ACMT(EW)SBI 20/12/24

स.का.प्र.-इं.का, साबरमती
AWM-EW, Sabarmati

WELDING PROCEDURE QUALIFICATION RECORD (WPQR)

No: - ACMT/EW/SBI/WQT/02/25

Date: - 29.01.2025

Sub: - Welder's qualification

Ref: - STR/Inspection, Dated: - 22.01.2025

With reference to above subject below welders were qualified in the test.

Sr. No	Name of welder	Welding process
1	Prabandh Kumar	SAW & GMAW
2	Dinesh Kumar	SAW & GMAW
3	Solanki Rajesh Bhai	SAW & GMAW
4	Thakor Ashwin Kumar	SAW & GMAW
5	Rakesh Kumar	GMAW
6	Thakor Bharatji	GMAW

Enclosed:

WPQR Sheet

29/01/25

ACMT/EW/SBI

Test Results of WQT

Date:27.01.2025

ef No.: - SSE/STR No. STR/Inspection Dated: - 22.01.2025
bricator: - M/S Engineering Workshop Sabarmati
aterial: IS 2062:2011(Ra2016) Gr. E-250B0 to IS 2062:2011(Ra2016) Gr. E-250B0

R. O	SAMPLE-ID	WELD PROCESS	WELDER NAME	WELD SIZE mm	FILLET MACRO MEASUREMENT										DPT TEST	FRACTURE TEST
					MACRO-1					MACRO-2						
					Horizontal Leg length	Vertical Leg length	Throat	Root pen.	Observation	Horizontal Leg length	Vertical Leg length	Throat	Root pen.	Observation		
	SAW/01	SAW	Prabandh Kumar	14	15.2	16.4	10.4	3.4	Satisfactory	15.8	15.4	10.7	2.6	Satisfactory	Satisfactory	Satisfactory
	SAW/02	SAW	Dinesh Kumar	14	14.8	15.4	10.2	2.8	Satisfactory	15.3	15.6	11.2	3.4	Satisfactory	Satisfactory	Satisfactory
	SAW/03	SAW	Solanki Rajesh Bhai	14	15.4	14.9	10.0	3.0	Satisfactory	15.6	14.9	10.6	3.2	Satisfactory	Satisfactory	Satisfactory
	SAW/04	SAW	Thakor Ashwin Kumar	14	16.4	15.8	10.6	3.2	Satisfactory	16.3	15.4	10.8	3.0	Satisfactory	Satisfactory	Satisfactory
	GMAW/01	GMAW	Prabandh Kumar	12	13.4	13.6	9.2	3.0	Satisfactory	13.4	13.8	9.4	2.8	Satisfactory	Satisfactory	Satisfactory
	GMAW/02	GMAW	Dinesh Kumar	12	12.8	13.4	9.6	2.4	Satisfactory	13.7	13.2	9.8	2.6	Satisfactory	Satisfactory	Satisfactory
	GMAW/03	GMAW	Solanki Rajesh Bhai	12	13.2	14.3	9.4	2.6	Satisfactory	14.3	13.4	10.0	2.6	Satisfactory	Satisfactory	Satisfactory
	GMAW/04	GMAW	Thakor Ashwin Kumar	12	13.6	13.8	9.2	2.8	Satisfactory	12.8	13.2	9.2	3.2	Satisfactory	Satisfactory	Satisfactory
	GMAW/05	GMAW	Rakesh Kumar	12	13.8	14.4	9.6	3.0	Satisfactory	13.4	13.4	9.4	3.4	Satisfactory	Satisfactory	Satisfactory
	GMAW/06	GMAW	Thakor Bharatji	12	14.2	13.6	9.4	2.6	Satisfactory	12.8	13.2	9.6	2.8	Satisfactory	Satisfactory	Satisfactory

29/01/25
ACMT/EWS/SBI

सहायक रसायन व धातुकर्म अधिकारी
(इं.का.) साबरमती, प. रे.
ACMT (EW) SBI, W. R.

27.01.25
CMS/QCL/EWS/SBI

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पश्चिम रेलवे

सीसेइंजी(संरचना) का कार्यालय
इंजीनियरी कारखाना, साबरमती
दिनाँक : 22.01.2025

संख्या : STR/Inspection

CMS/QC1/ELHS

ACMT(EW)SBI

24/01/25

विषय : Offer letter for Welder qualification test

संदर्भ : 1) Your office letter No.FIU/EW/SBI/WPQR (Dept.) dtd.18.01.25
2) WPSS No.SBI/WPG/12.2m/25T/R2

In subject and reference to above, the following welders are offer for welding approval test for 12.2m WPG as per drawing no. RDSO/B-16014/R2 series.

Sr. No	Name of Welder	GAC No	Type of welding	Fillet size (mm)	Aadhar No of Welder
1	Pnbandh kumar	1784	SAW & GMAW	14 & 12	6700 7505 7600
2	Dinesh Kumar	1711	SAW & GMAW	14 & 12	4174 3733 5879
3	Solanki Rajeshbhai	1019	SAW & GMAW	14 & 12	2368 7159 9829
4	Thakor Ashwinkumar	1105	SAW & GMAW	14 & 12	2341 2555 3134
5	Rakesh kumar	1031	GMAW	14 & 12	5061 7042 1533
6	Thakor Bharatji	1020	GMAW	14 & 12	6504 0245 1983

Therefore, it is requested to please prepare and approved WPQR for above welders.

22/1/25

सीसेइंजी (संरचना) इंकी साबरमती

Welding Procedure Qualification Record

WPQR No	WPQR/12.2m/25T/EWS/SBI/SAW/01	
WPSS Reference No	SBI/WPG/12.2M/25T/R1/2,3	
Welder Name	Prabandh Kumar	
Sample Identification	SAW/01	
Method Of Identification	Mark on sample	
GAC No.	1784	
Employer	Indian Railways	
Code/Testing Standard	IS 7310-2019, P-1	
Job Knowledge	Acceptable	
	Test piece	Range of qualification
Welding process	121(saw)	121(saw)
Transfer Mode	N. A	N. A
Product type	Plate	Plate
Type of weld	Fillet welding (FW)	Fillet welding (FW)
Parent Material Group/sub-Group	IS 2062:2011, E250 B0	IS 2062:2011, E250 B0
Filler Material Group	Solid steel wire -4mm	Solid steel wire -4mm
Filler Material (Designation)	IRSM-39 Class w1 & Flux-F1	IRSM-39 Class w1 & Flux-F1
Shielding gas	N. A	N. A
Auxiliaries	N. A	N. A
Type of current and polarity	DCEP	DCEP
Material thickness (mm)	40 X 28 mm	≥ 3mm
Deposited thickness(mm)	14 mm fillet	SL≤ 8 mm, ML ≥ 10mm
Welding Position	PA	PA(IF)
Weld Details	Fillet weld (FW)	Fillet weld (FW)
Multi-layer /single layer	Multi -layer (ML)	Single -Layer, Multi-layer
Type of Test	Performed and acceptance	Name of Examiner or Examining body:
Visual testing	Satisfactory	Place: EWS/SBI
Dye penetration Testing	Satisfactory	Date of test: 25/01/25
Fracture Test	Satisfactory	Signature of examiner:
Macroscopic Examination	Satisfactory	Date of inspection:

29/01/25

सहायक रसायन व धातुकर्म अधिकारी
(इं.का.) साबरमती, प. रे.
ACMT (EW) SBI, W. R.

Welding Procedure Qualification Record

WPQR No	WPQR/12.2m/25T/EWS/SBI/SAW/02	
WPSS Reference No	SBI/WPG/12.2M/25T/R1/2,3	
Welder Name	Dinesh Kumar	
Sample Identification	SAW/02	
Method Of Identification	Mark on sample	
GAC No.	1711	
Employer	Indian Railways	
Code/Testing Standard	IS 7310-2019, P-1	
Job Knowledge	Acceptable	
	Test piece	Range of qualification
Welding process	121(saw)	121(saw)
Transfer Mode	N. A	N. A
Product type	Plate	Plate
Type of weld	Fillet welding (FW)	Fillet welding (FW)
Parent Material Group/sub-Group	IS 2062:2011, E250 B0	IS 2062:2011, E250 B0
Filler Material Group	Solid steel wire -4mm	Solid steel wire -4mm
Filler Material (Designation)	IRSM-39 Class w1 & Flux-F1	IRSM-39 Class w1 & Flux-F1
Shielding gas	N. A	N. A
Auxiliaries	N. A	N. A
Type of current and polarity	DCEP	DCEP
Material thickness (mm)	40 X 28 mm	≥ 3mm
Deposited thickness(mm)	14 mm fillet	SL≤ 8 mm, ML ≥ 10mm
Welding Position	PA	PA(IF)
Weld Details	Fillet weld (FW)	Fillet weld (FW)
Multi-layer /single-layer	Multi -layer (ML)	Single -Layer, Multi-layer

Type of Test	Performed and acceptance	Name of Examiner or Examining body:
Visual testing	Satisfactory	Place: EWS/SBI
Dye penetration Testing	Satisfactory	Date of test: 25/01/25
Fracture Test	Satisfactory	Signature of examiner:
Macroscopic Examination	Satisfactory	Date of inspection:

29/01/25

सहायक रसायन व धातुकर्म अधिकारी
(इं.का.) साबरमती, प. रे.
ACMT (EW) SBI, W. R.

Welding Procedure Qualification Record

WPQR No	WPQR/12.2m/25T/EWS/SBI/SAW/03	
WPSS Reference No	SBI/WPG/12.2M/25T/R1/2,3	
Welder Name	Solanki Rajesh Bhai	
Sample Identification	SAW/03	
Method Of Identification	Mark on sample	
GAC No.	1019	
Employer	Indian Railways	
Code/Testing Standard	IS 7310-2019, P-1	
Job Knowledge	Acceptable	
	Test piece	Range of qualification
Welding process	121(saw)	121(saw)
Transfer Mode	N. A	N. A
Product type	Plate	Plate
Type of weld	Fillet welding (FW)	Fillet welding (FW)
Parent Material Group/sub-Group	IS 2062 E250 B0	IS 2062 E250 B0
Filler Material Group	Solid steel wire -4mm	Solid steel wire -4mm
Filler Material (Designation)	IRSM-39 Class W1 & Flux-F1	IRSM-39 Class W1 & Flux-F1
Shielding gas	N. A	N. A
Auxiliaries	N. A	N. A
Type of current and polarity	DCEP	DCEP
Material thickness (mm)	40 X 28 mm	≥ 3mm
Deposited thickness(mm)	14 mm fillet	SL≤ 8 mm, ML ≥ 10.mm
Welding Position	PA	PA(IF)
Weld Details	Fillet weld (FW)	Fillet weld (FW)
Multi-layer /single-layer	Multi-layer (ML)	Single -Layer, Multi-layer
Type of Test	Performed and acceptance	Name of Examiner or Examining body:
Visual testing	Satisfactory	Place: EWS/SBI
Dye penetration Testing	Satisfactory	Date of test: 25/01/25
Fracture Test	Satisfactory	Signature of examiner
Macroscopic Examination	Satisfactory	Date of inspection: 25/01/25

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(इं.का.) साबरमती, प. रे.
ACMT (EW) SBI, W. R.

Welding Procedure Qualification Record

WPQR No	WPQR/12.2m/25T/EWS/SBI/SAW/04	
WPSS Reference No	SBI/WPG/12.2M/25T/R1/2,3	
Welder Name	Thakor Ashwin Kumar	
Sample Identification	SAW/04	
Method Of Identification	Mark on sample	
GAC No.	1105	
Employer	Indian Railways	
Code/Testing Standard	IS 7310-2019, P-1	
Job Knowledge	Acceptable	
	Test piece	Range of qualification
Welding process	121(saw)	121(saw)
Transfer Mode	N. A	N. A
Product type	Plate	Plate
Type of weld	Fillet welding (FW)	Fillet welding (FW)
Parent Material Group/sub-Group	IS 2062 E250 B0	IS 2062 E250 B0
Filler Material Group	Solid steel wire -4mm	Solid steel wire -4mm
Filler Material (Designation)	IRSM-39 Class W1 & Flux-F1	IRSM-39 Class W1 & Flux-F1
Shielding gas	N. A	N. A
Auxiliaries	N. A	N. A
Type of current and polarity	DCEP	DCEP
Material thickness (mm)	40 X 28 mm	≥ 3mm
Deposited thickness(mm)	14 mm fillet	SL≤ 8 mm, ML ≥ 10.mm
Welding Position	PA	PA(IF)
Weld Details	Fillet weld (FW)	Fillet weld (FW)
Multi-layer /single-layer	Multi-layer (ML)	Single -Layer, Multi-layer
Type of Test	Performed and acceptance	Name of Examiner or Examining body:
Visual testing	Satisfactory	Place: EWS/SBI
Dye penetration Testing	Satisfactory	Date of test: 25/01/25
Fracture Test	Satisfactory	Signature of examiner:
Macroscopic Examination	Satisfactory.	Date of inspection: 25/01/25

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(इ.का.) साबरमती, प. रे.
ACMT (EW) SBI, W. R.

Welding Procedure Qualification Record

WPQR No	WPQR/12.2m/25T/EWS/SBI/GMAW/01	
WPSS Reference No	SBI/WPG/12.2M/25T/R2/4,5,7,8	
Welder Name	Prabandh Kumar	
Sample Identification	GMAW/01	
Method Of Identification	Mark on sample	
GAC No.	1784	
Employer	Indian Railways	
Code/Testing Standard	IS 7310-2019, P-1	
Job Knowledge	Acceptable	
	Test piece	Range of qualification
Welding process	131(GMAW)	131(GMAW)
Transfer Mode	Globular transfer	Globular transfer
Product type	Plate	Plate
Type of weld	Fillet welding (FW)	Fillet welding (FW)
Parent Material Group/sub-Group	Group-1/sub- Group -1.1	Group-1/sub- Group -1.1
Filler Material Group	Solid wire -1.2 mm	Solid wire -1.2 mm
Filler Material (Designation)	IRSM-46 CL. I	IRSM-46 CL. I
Shielding gas	CO_2	CO_2
Auxiliaries	N. A	N. A
Type of current and polarity	DCEP	DCEP
Material thickness (mm)	16 X 28 mm	≥ 3mm
Deposited thickness(mm)	10 mm fillet	SL≤ 6 mm, ML ≥ 8mm
Welding Position	PB	PA(IF) & PB(2F)
Weld Details	Fillet weld (FW)	Fillet weld (FW)
Multi-layer /single layer	Multi -layer (ML)	Single -Layer, Multi-layer
Type of Test	Performed and acceptance	Name of Examiner or Examining body:
Visual testing	Satisfactory	Place: EWS/SBI
Dye penetration Testing	Satisfactory	Date of test: 27/01/25
Fracture Test	Satisfactory	Signature of examiner:
Macroscopic Examination	Satisfactory.	Date of inspection: 27/01/25

29/01/25

सहायक रसायन व धातुकर्म अधिकारी
(इं.का.) साबरमती, प. रे.

Welding Procedure Qualification Record

WPQR No	WPQR/12.2m/25T/EWS/SBI/GMAW/02	
WPSS Reference No	SBI/WPG/12.2M/25T/R2/4,5,7,8	
Welder Name	Dinesh Kumar	
Sample Identification	GMAW/02	
Method Of Identification	Mark on sample	
GAC No.	1711	
Employer	Indian Railways	
Code/Testing Standard	IS 7310-2019, P-1	
Job Knowledge	Acceptable	
	Test piece	Range of qualification
Welding process	131(GMAW)	131(GMAW)
Transfer Mode	Globular transfer	Globular transfer
Product type	Plate	Plate
Type of weld	Fillet welding (FW)	Fillet welding (FW)
Parent Material Group/sub-Group	Group-1/sub- Group -1.1	Group-1/sub- Group -1.1
Filler Material Group	Solid wire -1.2 mm	Solid wire -1.2 mm
Filler Material (Designation)	IRSM-46 CL. I	IRSM-46 CL. I
Shielding gas	CO2	CO2
Auxiliaries	N. A	N. A
Type of current and polarity	DCEP	DCEP
Material thickness (mm)	16 X 28 mm	≥ 3mm
Deposited thickness(mm)	10 mm fillet	SL≤ 6 mm, ML ≥ 8mm
Welding Position	PB	PA(IF) & PB(2F)
Weld Details	Fillet weld (FW)	Fillet weld (FW)
Multi-layer /single layer	Multi -layer (ML)	Single -Layer, Multi-layer
Type of Test	Performed and acceptance	Name of Examiner or Examining body:
Visual testing	Satisfactory	Place: EWS/SBI
Dye penetration Testing	Satisfactory	Date of test: 27/01/25
Fracture Test	Satisfactory	Signature of examiner:
Macroscopic Examination	Satisfactory	Date of inspection: 27/01/25

Satisfactory 29/01/25

सहायक रसायन व धातुकर्म अधिकारी
(इं.का.) साबरमती, प. रे.

Welding Procedure Qualification Record

WPQR No	WPQR/12.2m/25T/EWS/SBI/GMAW/03	
WPSS Reference No	SBI/WPG/12.2M/25T/R2/4,5,7,8	
Welder Name	Solanki Rajesh Bhai	
Sample Identification	GMAW/03	
Method Of Identification	Mark on sample	
GAC No.	1019	
Employer	Indian Railways	
Code/Testing Standard	IS 7310-2019, P-1	
Job Knowledge	Acceptable	
	Test piece	Range of qualification
Welding process	131(GMAW)	131(GMAW)
Transfer Mode	Globular transfer	Globular transfer
Product type	Plate	Plate
Type of weld	Fillet welding (FW)	Fillet welding (FW)
Parent Material Group/sub-Group	Group-1/sub- Group -1.1	Group-1/sub- Group -1.1
Filler Material Group	Solid wire -1.2 mm	Solid wire -1.2 mm
Filler Material (Designation)	IRSM-46 CL. I	IRSM-46 CL. I
Shielding gas	CO2	CO2
Auxiliaries	N. A	N. A
Type of current and polarity	DCEP	DCEP
Material thickness (mm).	16 X 28 mm	≥ 3mm
Deposited thickness(mm)	10 mm fillet	SL≤ 6 mm, ML ≥ 8mm
Welding Position	PB	PA(IF) & PB(2F)
Weld Details	Fillet weld (FW)	Fillet weld (FW)
Multi-layer /single layer	Multi -layer (ML)	Single -Layer, Multi-layer
Type of Test	Performed and acceptance	Name of Examiner or Examining body:
Visual testing	Satisfactory	Place: EWS/SBI
Dye penetration Testing	Satisfactory	Date of test: 27/01/25
Fracture Test	Satisfactory	Signature of examiner:
Macroscopic Examination	Satisfactory	Date of inspection: 27/01/25

29/01/25

सहायक रसायन व धातुकर्म अधिकारी

Welding Procedure Qualification Record

WPQR No	WPQR/12.2m/25T/EWS/SBI/GMAW/04	
WPSS Reference No	SBI/WPG/12.2M/25T/R2/4,5,7,8	
Welder Name	Thakor Ashwin Kumar	
Sample Identification	GMAW/04	
Method Of Identification	Mark on sample	
GAC No.	1105	
Employer	Indian Railways	
Code/Testing Standard	IS 7310-2019, P-1	
Job Knowledge	Acceptable	
	Test piece	Range of qualification
Welding process	131(GMAW)	131(GMAW)
Transfer Mode	Globular transfer	Globular transfer
Product type	Plate	Plate
Type of weld	Fillet welding (FW)	Fillet welding (FW)
Parent Material Group/sub-Group	Group-1/sub- G r o u p -1.1	Group-1/sub- G r o u p -1.1
Filler Material Group	Solid wire -1.2 mm	Solid wire -1.2 mm
Filler Material (Designation)	IRSM-46 CL. I	IRSM-46 CL. I
Shielding gas	ISO 14175 -M2(1)	ISO 14175 -M2(1)
Auxiliaries	N. A	N. A
Type of current and polarity	DCEP	DCEP
Material thickness (mm)	16 X 28 mm	≥ 3mm
Deposited thickness(mm)	10 mm fillet	SL≤ 6 mm, ML ≥ 8mm
Welding Position	PB	PA(IF) & PB(2F)
Weld Details	Fillet weld (FW)	Fillet weld (FW)
Multi-layer /single-layer	Multi -layer (ML)	Single -Layer, Multi-layer
Type of Test	Performed and acceptance	Name of Examiner or Examining body:
Visual testing	Satisfactory	Place: EWS/SBI
Dye penetration Testing	Satisfactory	Date of test: 27/01/25
Fracture Test	Satisfactory	Signature of examiner:
Macroscopic Examination	Satisfactory	Date of inspection: 27/01/25

29/01/25

सहायक रसायन व धातुकर्म अधिकारी
(इं.का.) साबरमती, प. रे.

Welding Procedure Qualification Record

WPQR No	WPQR/12.2m/25T/EWS/SBI/GMAW/05	
WPSS Reference No	SBI/WPG/12.2M/25T/R2/4,5,7,8	
Welder Name	Rakesh Kumar	
Sample Identification	GMAW/05	
Method Of Identification	Mark on sample	
GAC No.	1031	
Employer	Indian Railways	
Code/Testing Standard	IS 7310-2019, P-1	
Job Knowledge	Acceptable	
	Test piece	Range of qualification
Welding process	131(GMAW)	131(GMAW)
Transfer Mode	Globular transfer	Globular transfer
Product type	Plate	Plate
Type of weld	Fillet welding (FW)	Fillet welding (FW)
Parent Material Group/sub-Group	Group-1/sub- G r o u p -1.1	Group-1/sub- G r o u p -1.1
Filler Material Group	Solid wire -1.2 mm	Solid wire -1.2 mm
Filler Material (Designation)	IRSM-46 CL. I	IRSM-46 CL. I
Shielding gas	ISO 14175 -M2(1)	ISO 14175 -M2(1)
Auxiliaries	N. A	N. A
Type of current and polarity	DCEP	DCEP
Material thickness (mm)	16 X 28 mm	≥ 3mm
Deposited thickness(mm)	12 mm fillet	SL≤ 6 mm, ML ≥ 8mm
Welding Position	PB	PA(IF) & PB(2F)
Weld Details	Fillet weld (FW)	Fillet weld (FW)
Multi-layer /single layer	Multi -layer (ML)	Single -Layer, Multi-layer
Type of Test	Performed and acceptance	Name of Examiner or Examining body:
Visual testing	Satisfactory	Place: EWS/SBI
Dye penetration Testing	Satisfactory	Date of test: 27/01/25
Fracture Test	Satisfactory	Signature of examiner:
Macroscopic Examination	Satisfactory.	Date of inspection: 27/01/25

29/01/25

सहायक रसायन व धातुकर्म अधिकारी
(इं.का.) साबरमती, प. रे.
ACMT (EW) SBI, W. R.

Welding Procedure Qualification Record

WPQR No	WPQR/12.2m/25T/EWS/SBI/GMAW/06	
WPSS Reference No	SBI/WPG/12.2M/25T/R1/4,5,7,8	
Welder Name	Thakor Bharat ji	
Sample Identification	GMAW/06	
Method Of Identification	Mark on sample	
GAC No.	1020	
Employer	Indian Railways	
Code/Testing Standard	IS 7310-2019, P-1	
Job Knowledge	Acceptable	
	Test piece	Range of qualification
Welding process	131(GMAW)	131(GMAW)
Transfer Mode	Globular transfer	Globular transfer
Product type	Plate	Plate
Type of weld	Fillet welding (FW)	Fillet welding (FW)
Parent Material Group/sub-Group	Group-1/sub- Group -1.1	Group-1/sub- Group -1.1
Filler Material Group	Solid wire -1.2 mm	Solid wire -1.2 mm
Filler Material (Designation)	IRSM-46 CL. I	IRSM-46 CL. I
Shielding gas	CO2	CO2
Auxiliaries	N. A	N. A
Type of current and polarity	DCEP	DCEP
Material thickness (mm)	16 X 28 mm	≥ 3mm
Deposited thickness(mm)	12 mm fillet	SL≤ 6 mm, ML ≥ 8mm
Welding Position	PB	PA(IF) & PB(2F)
Weld Details	Fillet weld (FW)	Fillet weld (FW)
Multi-layer /single layer	Multi -layer (ML)	Single -Layer, Multi-layer
Type of Test	Performed and acceptance	Name of Examiner or Examining body:
Visual testing	Satisfactory.	Place: EWS/SBI
Dye penetration Testing	Satisfactory.	Date of test: 27/01/25
Fracture Test	Satisfactory	Signature of examiner:
Macroscopic Examination	Satisfactory.	Date of inspection: 27/01/25

29/01/25

सहायक रसायन व धातुकर्म अधिकारी
(इं.का.) साबरमती, प. रे.
ACMT (EW) SBI, W. R.

JIG / MASTER PLATE CLEARANCE

WESTERN RAILWAY

पश्चिम रेलवे
Western Railway

Office of the Chief Engineer,
(EWS), Kaligaon,
Sabarmati, Ahmedabad-382470
E-mail-cwmewsbi787@gmail.com

No. FIU/EW/SBI/12.2mWPG (Dept)

Date: 03.02.2025.

Dy.CE/EW/SBI

Sub: Master plate / layout & WPQR approval for 12.2m WPG as per drawing no. RDSO/B-16014/R2 series.

Ref.: i.) Your office letter No. STR/Inspection Dt. 24.12.2024.
ii.) Your office letter No. STR/Inspection Dt. 21.12.2024 received on 16.01.2025.
ii.) This office letter no. FIU/EW/SBI/WPQR (Dept) Dt. 18.01.2025.
v.) ACMT/EW/SBI's letter no. ACMT/EW/SBI/WQT/02/25 Dt. 29.01.2025.

***

With reference to above, Master plate / layout inspection done on 26.12.2024 & WPQR was done by QC-Lab/EW/SBI on 25.01.2025 for 12.2m WPG as per drawing no. RDSO/B-16014/R2 series.

Master plate & WPQR test samples are found satisfactory vide ref.3.

Approved Master plate / layout & welders (as per annexure) may be engaged in above subjected work.

In view of above, go-ahead clearance for further fabrication is being issued.

However, during fabrication, it should be ensured that,

1. All fabrication related records and register to be maintained as per IRS B1 2001.
2. Traceability of raw material to be used should be ensure by marking through transferring heat no.

DA: Annexure.

03/02/2025

AWM/EW/SBI
For CWM (EWS)/ADI

C/- SSE/STR/EW/SBI:- For information.

"25t Loading - 200B"

12.2m Span
Plate Girder - Welded Type

Drawing NO : RDSO/B-16014/R2 to
RDSO/B-16014/SR2

* Dimensions :

Overall Length	: 13300	mm
Bearing Centre	: 13100	mm
Centre to Centre of Girder	: 1850	mm
Height of Girder	: 1248	mm
Top Diagonals	: 13428	mm
End Diagonals	: 2232	mm

* Drawing No: RDSO/B-16014/R2

① Top Lateral Bracings - Master, Jig

26/12

- SSE/STR

P

* Drawing NO: RDSO/B-16014/2 R2

① End Bearing Stiffener - Master, Jig.

② Diaphgram Web Plate - Master, Jig.

26/12
JE/MD

-SSE/STR

* Drawing No: RDSO/B-16014/282

① Intermediate Stiffener - Master, Jig

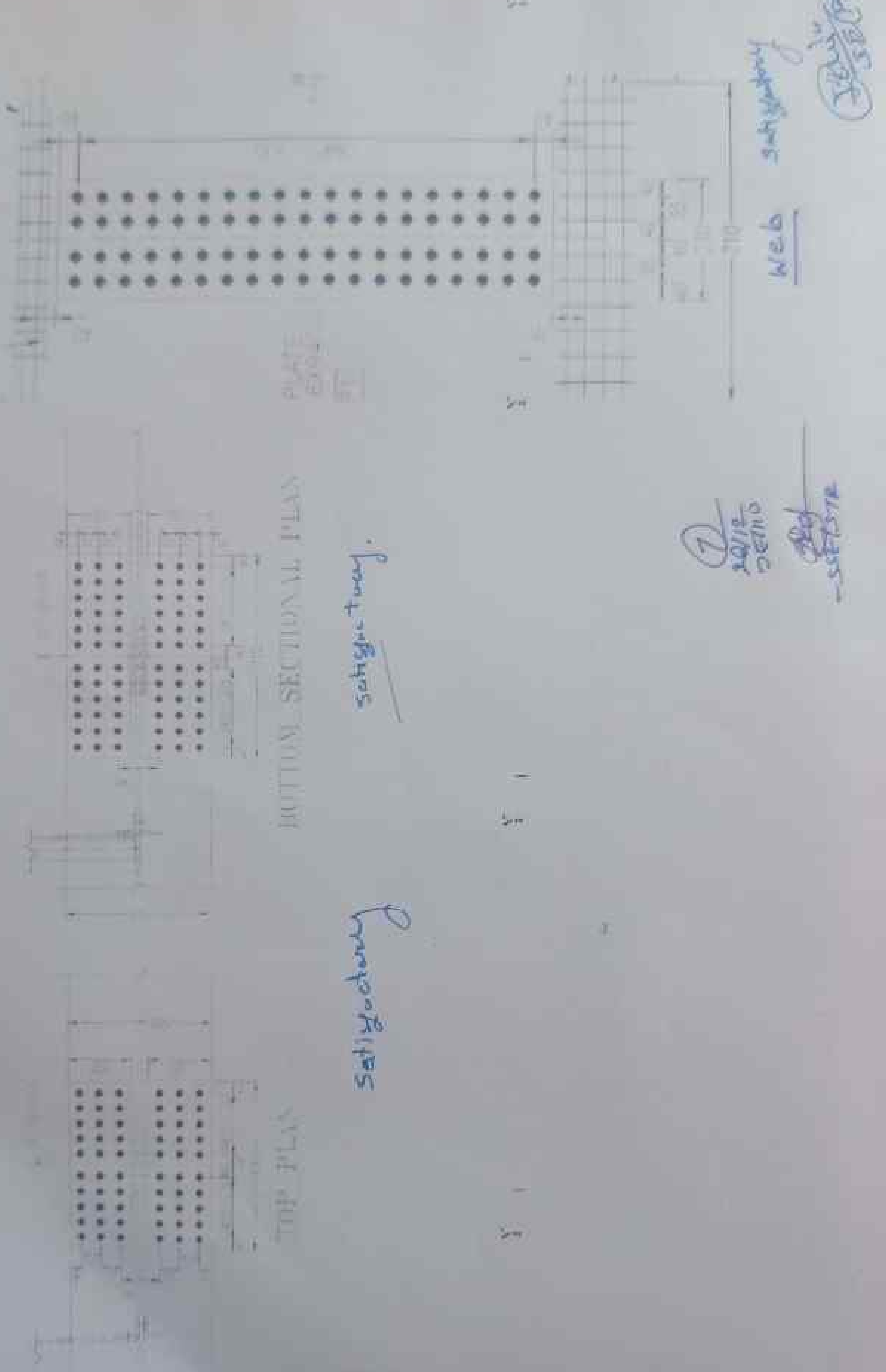
② Top / Btm Gusset Plate - Master, Jig

③ Centre Gusset Plate - Protile

④ Horizontal Angel - Master, Jig

26/12
JE/IIU

- SSE/STR


BOTTOM SECTIONAL PLAN
TOP PLAN
Web
satisfactory
satisfactory
Satisfactory

* Drawing No: RDSO/B-16014/1R2

1. Top outer Cover Plate - Master
2. Top Inner Cover Plate. - Master
3. Web cover Plate - Master
4. Bottom Outer Cover Plate - Master
5. Bottom Inner Cover Plate - Master

26/12
JE/IIO

JE(P&D)

SSE/STR

Q R S T U V W X Y Z

WESTERN RAILWAY

Office of
Senior Section Engineer (STR)
Engineering Workshop,
Sabarmati.
Date: 24-12-2024

No: Template/Inspection of Plate Girder

Dy. CE,
EW, SBI.

SUB : Masters Inspection of 12.2m WPG as Per RDSO Drawing No: RDSO/B-16014/R2 Series
Ref : Work Order No.: 67971372

With reference to the above subject, The Masters of End Diaphragm, End Diaphragm Stiffener, X-Frame Stiffener, X-Frame Top, Bottom Gussets, Horizontal Angle, Top Lateral Angle of 12.2m WPG as per Drawing No: RDSO/B-16014/R2 Series has been done at Template Shop.
It is requested to give necessary orders for inspection above Masters by FIU.

24/12/24
SSE(STR)

EW, SBI

AWM/EW3
Depute. FIU.

SSE/FIU
For n/a please.

RAW MATERIAL CLEARANCE

पश्चिम रेलवे
Western Railway

गुणवत्ता नियंत्रण प्रयोगशाला
इंजीनियरिंग कारखाना,
साबरमती, अहमदाबाद

Date: - 01.03.2025

Raw Materials & Consumables certificate

Name of Work: - 4X12.2m WPG

Work order no: - 67971372

Ref. No.: -
QCL/EWS/SBI/Scrutiny/MTC/STR/2024-25, Dt. – 01.03.2025
SSE/STR/EWS/SBI Letter no- 67971372, Dt. 21.02.2025
ACMT/Note/No.QCL/EWS/Raw material testing/2024/Dt. 10/10/2024

With reference to above, raw materials (Plates and Angles) are suitable as per Mill TC.

Enclosed: - Scrutinised MTC letter

01/03/25
ACMT/EW/SBI

पश्चिम रेलवे
Western Railway

गुणवत्ता नियंत्रण प्रयोगशाला
इंजीनियरिंग कारखाना,
साबरमती, अहमदाबाद

Letter No: - QCL/EWS/SBI/Scrutiny/MTC/STR/2024-25 **Date: - 01.03.2025**

Sub: - Scrutiny of raw materials MTC for 4X12.2m WPG

Ref: SSE/STR/EWS/SBI Letter no- 67971372 Dt. 21.02.2025

With above reference all test certificates provided by STR/EWS/SBI 4X12.2m WPG (W.O – 67971372) are scrutinized and found satisfactory as per IS 2062:2011(Ra 2016).

This is for kind information and necessary action please.

Enclose: - Scrutinized MTC report.

01/3/25
CMS/QCL/EWS/SBI

01/03/25
ACMT/EW/SBI

Scrutiny of Raw material MTC

Work details: - 4X12.2m span of W.O no 67971372
Fabricator: - Engineering Workshop, Sabarmati
Materials: - IS 2062 E 250 B0 2011

Description	Size(mm) (TXWXL)	Make	Heat no./Cast no./ Plate no.	Mill TC no./ Invoice no.	Chemical Analysis	Mechanical Properties	Bend test	Ultrasonic Testing
Angle	100*100*12	SAIL	24100226	160011142	Satisfactory	Satisfactory	Ok	NA
PM Plate	50x2500x12000	SAIL	1917710	398925	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	28x2000x10000	SAIL	2406611	724092	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	40x2500x12000	SAIL	2406663	724092	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	28x2000x10000	SAIL	2406611	724082	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	40x2500x12000	SAIL	2406648	724082	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	40x2500x12000	SAIL	2406657	724082	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	40x2500x12000	SAIL	2406652	724082	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	40x2500x12000	SAIL	2406643	724082	Satisfactory	Satisfactory	Ok	Satisfactory
MS Plate	28x2000x10000	SAIL	306332	80605820	Satisfactory	Satisfactory	Ok	Satisfactory
MS Plate	28x2000x10000	SAIL	306332	80605797	Satisfactory	Satisfactory	Ok	Satisfactory
MS Plate	16x2500x10000	SAIL	379577	80813580	Satisfactory	Satisfactory	Ok	Satisfactory
MS Plate	16x2500x10000	SAIL	380056	80813580	Satisfactory	Satisfactory	Ok	Satisfactory
MS Plate	16x2500x10000	SAIL	379522	80812306	Satisfactory	Satisfactory	Ok	Satisfactory
MS Plate	16x2500x10000	SAIL	380056	80812306	Satisfactory	Satisfactory	Ok	Satisfactory
MS Plate	16x2500x10000	SAIL	379517	62006045	Satisfactory	Satisfactory	Ok	Satisfactory
MS Plate	16x2500x10000	SAIL	379518	62006045	Satisfactory	Satisfactory	Ok	Satisfactory
MS Plate	16x2500x10000	SAIL	379517	62006044	Satisfactory	Satisfactory	Ok	Satisfactory
MS Plate	16x2500x10000	SAIL	379518	62006044	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	12x2500x10000	SAIL	2322464	700658	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	12x2500x10000	SAIL	2322583	700658	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	12x2500x10000	SAIL	2322589	700658	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	12x2500x10000	SAIL	2322592	700658	Satisfactory	Satisfactory	Ok	Satisfactory
PM Plate	12x2500x10000	SAIL	2322586	700658	Satisfactory	Satisfactory	Ok	Satisfactory
Angle	75*75*10	SAIL	DC00707 890000508350	1000042	Satisfactory	Satisfactory	Ok	NA
Angle	75*75*10	SAIL	DC00708 890000508351	1000042	Satisfactory	Satisfactory	Ok	NA

Ram 01/03/25
AEMT/EW/SBL

CMS/PCL
01/03/25

सेल SAIL

स्टील अथॉरिटी ऑफ इंडिया लिमिटेड
STEEL AUTHORITY OF INDIA LIMITED
दुर्गापुर स्टील प्लांट / DURGAPUR STEEL PLANT
दुर्गापुर / DURGAPUR - 713203
पंजीकृत कार्यालय : इस्पात भवन , लोदी रोड ,नई दिल्ली
Registered Office: Ispat Bhawan, Lodi Road, New Delhi-110003

IS 2062:2011

(Licence No: CM/L-0057635)

जाँच प्रमाणपत्र /Test Certificate

जाँच प्रमाणपत्र संख्या / Test certificate Number	: 0160011142	DA संख्या / DA Number	: 81068874
जाँच प्रमाण पत्र की तारीख / Test certificate Date	: 16.04.2024	DA तारीख / DA Date	: 16.04.2024
वैगन / ट्रक संख्या / Wagon / Truck Number	: ECO BOST 21120649122	कुल DA / Total DA Wt.	: 60.700 MT
शाखा / Branch	: BHILAI	DA का प्रकार / DA Type	: Direct

TEST CERTIFICATE FOR HOT ROLLED,MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

सेवा मे / TO : AGRASEN IRON AND

प्रेषिती का नाम और पता / Consignee Name & Address:
AGRASEN IRON AND STEELS PVT. LTD.
KHASRA NO. 423/12 AND 13, GUMA NANDANVAN ROAD,AHEAD OF Raipur
Chhattisgarh - 492099

यह प्रमाणित किया जाता है कि नीचे दी गई सामग्री पूरी तरह IS 2062:2011 के अनुरूप है। उत्पाद की रासायनिक संरचना और यांत्रिक गुण, BIS प्रमाणन चिह्न लाइसेन्स संख्या CM/L-0057635 मे निहित परीक्षण और निरीक्षण की योजना से किया गया है, जिसे प्रत्येक आदेश संख्या के सामने नीचे दर्शाया गया है।
It is certified that material described below fully conforms to IS 2062:2011 . Chemical composition of the product, as tested in accordance with the scheme of testing and inspection contained in the BIS Certification Marks Licence No. CM/L-0057635 are as indicated below against each order number.

(कृपया विशेष आवश्यकताओं के विवरण के लिए IS 2062:2011 देखें)
(Please refer to IS 2062:2011 for details of specification requirements).

जांच परिणाम / TEST RESULT

Product	MP/Order No	Weight (MT)

GENTA ENTERPRISES

GURU VERITAS (INDIA) PRIVATE LIMITED

24/10/2024

सेल SAIL

स्टील अथॉरिटी ऑफ इंडिया लिमिटेड
STEEL AUTHORITY OF INDIA LIMITED
दुर्गापुर स्टील प्लांट / DURGAPUR STEEL PLANT
दुर्गापुर / DURGAPUR - 713203
पंजीकृत कार्यालय : इस्पात भवन , लोदी रोड ,नई दिल्ली
Registered Office: Ispat Bhawan, Lodi Road, New Delhi-110003
जाँच प्रमाणपत्र /Test Certificate

IS 2062:2011

(Licence No: CM/L-0057635)

Product	MP/Order No	Weight (MT)
ANGLE IS 2062 E250BR 100*100*12	1300241560	60.700

Product	Cast Number	Quantity (MT)	Mechanical Properties						
			YS	UTS	Imp 1	Imp 2	Imp 3	EL	Bend
		MPa	MPa	Joule	Joule	Joule	%		
ANGLE IS 2062 E250BR 100*100*12	24100226	60.700	328	483	28	28	32	28	Pass
			329	487	30	28	28	29	Pass

Cast Number	Chemical Analysis (Ladle)													
	C	Mn	S	P	Si	Al	Cu	Cr	Ni	V	Mo	Nb	B	CE
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
24100226	0.20	0.75	0.019	0.019	0.24	NS	NS	NS	NS	0.000	NS	NS	NS	0.325

** The Material supplied conforms to the standard rolling tolerances
** Invoice Weight is Final
** NS (Not Specified)
** Deoxidation Status - Killed
** Steel Making Process : BOF-CCP

CMS/QCC

(Saumya Pal)
के लिए मुख्य महाप्रबंधक (गुणवत्ता)
for CHIEF GENERAL MANAGER (Quality)
दुर्गापुर स्टील प्लांट / DURGAPUR STEEL PLANT

Page 2 of 2

10/2024

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IS 2062

STEEL AUTHORITY OF INDIA LIMITED
ROURKELA STEEL PLANT
ROURKELA - 769011 (ODISHA)
RESEARCH AND CONTROL LABORATORY

Test Certificate For : HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 398925 | Dated: 28.11.2019 | Product: PM Plate

To : WHM KHODIYAR CENTRAL MARKETING ORGANISATION SAIL,WH,KHODIYAR JAMMAYATPUR, Gandhinagar 382421

It is cerified that the materials described below fully conforms to IS 2062 - 2011. The chemical composition and Mechanical properties of the product as tested in accordance with the scheme of Testing and Inspection contained in BIS Certification marks License No CM/L 0000053223 are as indicated against each order. The material supplied conforms to standard Rolling and weight tolerances. (PLEASE REFER TO IS 2062 - 2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

Ladle Analysis

Cast No	C%	Mn%	P%	S%	Si%	Al%	CE
1917710	0.1400	1.3700	0.0210	0.0080	0.3950	0.0230	0.3680

Sl. No.	MP / SO No.	Cast	Size(mm) (TxWxL)	No of Piece(s)	Grade / Mode Of Killing	BATCH NUMBERS
1	1400430461	1917710	50x2500x12000	5	IS 2062 E250B0 / ALSIK / TRIM	CCN1828661,CCN1829301,CCN1829311,CCN1829321,CCN1829331

Total Pieces : 5 Total Weight(Tons) : 59.100

Mechanical Properties

Cast No.	YS (MPA)	UTS (MPA)	El (%)	Bend Test	SupplyCUST ond	(AS TM)	CVN (1) (J)	CVN (2) (J)	CVN (3) (J)	CVN at 0 degC (Avg) ()J
1917710	297	452	28	OK	NR	435	52	52	54	53
	303	456	28	OK						

Remarks : PROCESS ROUTE - BOF-LHF-CC-PM
ALL PLATES ARE UST DONE AS PER ASTMA435 OK AND PLATES ARE NORMALISED ROLLED OK.
FERR GRAIN SIZE ASTM 5 OR FINER
MICROSTRUCTURE CONSISTS OF POLYGONAL GRAINS OF FERRITE & PEARLITE.
FERRITIC GS AS PER ASTM E112 @2 PER HEAT NUMBER .... FOR EACH HEAT MENTIONED
PLATES OF HEAT NUMBER .01917710.. HAVE FERRITIC GRAIN SIZE ..6.5,7.0......

SAIL WAREHOUSE, KHODIYAR
This Test Certificate has been issued For 23.400 Coverd under Invoice No 0501000466 delivered to SR SEC CMGG (YMED) WIR in the vehicle no GJ18AZ3349

cms/QC

K PATWARI

Dispatch Advice No.: 812104787 | Dated: 25.11.2019 | Wagon No: BOST/SEC/21141128385

AGM , R&C Lab
Rourkela Steel Plant

6441BT2

STEEL AUTHORITY OF INDIA LIMITED
ROURKELA STEEL PLANT
ROURKELA - 769011 (ODISHA)
RESEARCH AND CONTROL LABORATORY

IS 2062

Test Certificate For: HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 724092 | **Dated: 19.04.2024** | **Product: PM Plate**

To : CENTRAL MARKETING ORG SAIL SAIL ,CA WAREHOUSE VIRAMGAM 382150

It is certified that the materials described below fully conforms to IS 2062 : 2011. The chemical composition and Mechanical properties of the product as tested in accordance with the scheme of Testing and Inspection contained in ISI Certification marks License No CML 0060003223 are as mentioned against each one. The material supplied conforms to standard Rolling and weight tolerances. (PLEASE REFER TO IS 2062 : 2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

Ladle Analysis

Cast No	C%	Mn%	P%	S%	Si%	Al%	CE	RHOB
2406611	0.1700	1.0200	0.0240	0.0200	0.2240	0.0500	0.3400	N
2406663	0.1700	1.1800	0.0240	0.0180	0.2500	0.0470	0.3570	Y

Sl. No.	MP / SO No.	Cast / Batch No.	Size(mm) (TxWxL)	No of Piece(s)	Grade / Mode Of Killing	YS	UTS	El	Bend Test	Supply Cond	UST	CVN (1)	CVN (2)	CVN (3)	CVN at 0 degC (Avg)
						(MPA)	(MPA)	(%)			(ASTM A)	(J)	(J)	(J)	(J)
1	1400791818	2406611 / CCN3405391	28x2900x10000	1	IS 2062 E250B0 / ALSIK / TRIM	295	455	29	OK	NR	435	56	60	62	59
2	1400792326	2406663 / CCN3411811	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	299	453	29	OK						
3	1400792326	2406663 / CCN3411821	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	305	458	29	OK	NR	435	50	56	62	56
4	1400792326	2406663 / CCN3411831	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	302	457	28	OK						
5	1400792326	2406663 / CCN3411871	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	305	458	29	OK	NR	435	50	56	62	56
6	1400792326	2406663 / CCN3411881	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	302	457	28	OK						
						305	458	29	OK	NR	435	50	56	62	56
						302	457	28	OK						

Dispatch Advice No.: 812162519 **Dated: 17.04.2024** **Wagon No: BOST/ECOR/19120640126**

Rourkela Steel Plant

STEEL AUTHORITY OF INDIA LIMITED
ROURKELA STEEL PLANT
ROURKELA - 769011 (ODISHA)
RESEARCH AND CONTROL LABORATORY

IS 2062

Test Certificate For: HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 724092 | Dated: 19.04.2024 | Product: PM Plate

To : CENTRAL MARKETING ORG SAIL SAIL ,CA WAREHOUSE VIRAMGAM 382150

Sl. No.	MP / SO No.	Cast / Batch No.	Size(mm) (TxWxL)	No of Piece(s)	Grade / Mode Of Killing	YS	UTS	El	Bend Test	Suppl yCond	UST	CVN (1)	CVN (2)	CVN (3)	CVN at 0 degC (Avg)
						(MPA)	(MPA)	(%)			(ASTM A)	(J)	(J)	(J)	(J)
7	1400792326	2406663 / CCN3411891	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	305	458	29	OK	NR	435	50	56	62	56
						302	457	28	OK						

Total Pieces : 7 Total Weight(Tons) : 61.500

Remarks :
PROCESS ROUTE - BOF-LHF-RHOB-CC-NPM
ALL PLATES ARE UST OK AS PER ASTM A 435 : SATISFACTORY & LEVEL OF ACCEPTANCE AS PER TDC .
ALL PLATES ARE NORMALISED ROLLED OK.
FERR GRAIN SIZE ASTM 5 OR FINER
MICROSTRUCTURE CONSISTS OF POLYGONAL GRAINS OF FERRITE & PEARLITE.
FERRITIC GS AS PER ASTM E112 @2 PER HEAT NUMBER .... FOR EACH HEAT MENTIONED
PLATES OF HEAT NUMBER .02406611,02406663,.HAVE FERRITIC GRAIN SIZE 7.00 TO 7.50

SAIL WAREHOUSE, SACHANA
This Test Certificate has been issued
for 57.80 MT Covered under
Invoice No. 0S00100006?? delivered
to M/s. Sabarmati
In the Vehicle No. GJ01JT4304

CMS/QCL

Signature valid
Digitally signed by
BATA... GIRI
Date: ...4.19
16:50:3...

Dispatch Advice No.: 812162519 | Dated: 17.04.2024 | Wagon No: BOST/ECOR/19120640126

Rourkela Steel Plant

22/05 2079/76

STEEL AUTHORITY OF INDIA LIMITED
ROURKELA STEEL PLANT
ROURKELA - 769011 (ODISHA)
RESEARCH AND CONTROL LABORATORY

Test Certificate For: HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL		
Test Certificate No.: 724082	Dated: 18.04.2024	Product: PM Plate
To : CENTRAL MARKETING ORG SAIL SAIL ,CA WAREHOUSE VIRAMGAM 382150		

It is certified that the materials described below fully conforms to IS 2062 - 2011. The chemical composition and Mechanical properties of the product as tested in accordance with the scheme of Testing and Inspection contained in BIS Certification marks License No CM/L 0000053223 are as indicated against each order. The material supplied conforms to standard Rolling and weight tolerances. (PLEASE REFER TO IS 2062 - 2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

Ladle Analysis

Cast No	C%	Mn%	P%	S%	Si%	Al%	CE	RHOB
2406611	0.1700	1.0200	0.0240	0.0200	0.2240	0.0500	0.3409	N
2406643	0.1600	1.1500	0.0260	0.0030	0.1960	0.0350	0.3520	Y
2406648	0.1700	1.2500	0.0190	0.0130	0.2560	0.0490	0.3780	Y
2406652	0.1700	1.2200	0.0250	0.0110	0.2850	0.0280	0.3730	Y
2406657	0.1600	1.1900	0.0250	0.0210	0.2130	0.0230	0.3580	Y

Sl. No.	MP / SO No.	Cast / Batch No.	Size(mm) (TxWxL)	No of Piece(s)	Grade / Mode Of Killing	YS	UTS	El	Bend Test	Supply Cond	UST	CVN (1)	CVN (2)	CVN (3)	CVN at 0 degC (Avg)
						(MPA)	(MPA)	(%)			(ASTM A)	(J)	(J)	(J)	(J)
1	1400791816	2406611 / CCN3405392	28x2000x12000	1	IS 2062 E250B0 / ALSIK / TRIM	295	455	29	OK	NR	435	58	60	62	59
						299	453	29	OK						
2	1400792326	2406648 / CCN3406611	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	292	456	29	OK	NR	435	60	62	64	62
						290	453	29	OK						
3	1400792326	2406657 / CCN3406961	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	290	452	30	OK	NR	435	60	62	64	62
						289	450	30	OK						
4	1400792326	2406652 / CCN3406971	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	290	454	28	OK	NR	435	60	62	64	62
						288	452	28	OK						
5	1400792326	2406652 / CCN3406991	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	290	454	28	OK	NR	435	60	62	64	62

CMS/QCL

Dispatch Advice No.: 812162540	Dated: 17.04.2024	Wagon No: BOST/NCR/21131123420

Rourkela Steel Plant

24/04/2024 08

STEEL AUTHORITY OF INDIA LIMITED
ROURKELA STEEL PLANT
ROURKELA - 769011 (ODISHA)
RESEARCH AND CONTROL LABORATORY

IS 2062

Page 2 of 2

Test Certificate For: HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 724082 | Dated: 19.04.2024 | Product: PM Plate

To : CENTRAL MARKETING ORG SAIL SAIL ,CA WAREHOUSE VIRAMGAM 382150

Sl. No.	MP / SO No.	Cast / Batch No.	Size(mm) (TxWxL)	No of Piece(s)	Grade / Mode Of Killing	YS	UTS	El	Bend Test	Supply Cond	UST	CVN (1)	CVN (2)	CVN (3)	CVN at 0 degC (Avg)	
						(MPA)	(MPA)	(%)			(ASTM A)	(J)	(J)	(J)	(J)	
6	1400792326	2406652 / CCN3407001	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	288	452	28	OK							
						290	454	28	OK	NR	435	60	62	64	62	
						292	454	28	OK							
7	1400792326	2406643 / CCN3407081	40x2500x12000	1	IS 2062 E250B0 / ALSIK / TRIM	288	452	28	OK							
						295	455	28	OK	NR	435	60	62	64	62	
						292	454	28	OK							

Total Pieces : 7 Total Weight(Tons) : 61.450

Remarks : PROCESS ROUTE - BOF-LHF-RHOB-CC-NPM
ALL PLATES ARE UST OK AS PER ASTM A 435 ; SATISFACTORY & LEVEL OF ACCEPTANCE AS PER TDC.
ALL PLATES ARE NORMALISED ROLLED OK.
FERR GRAIN SIZE ASTM 5 OR FINER
MICROSTRUCTURE CONSISTS OF POLYGONAL GRAINS OF FERRITE & PEARLITE.
FERRITIC GS AS PER ASTM E112 @2 PER HEAT NUMBER ..... FOR EACH HEAT MENTIONED
PLATES OF HEAT NUMBER .02406611,02406649,02406645,02406652,02406657..HAVE FERRITIC GRAIN SIZE 7.00 TO 7.50

SAIL WAREHOUSE, SACHANA
This Test Certificate has been issued for 57.190 MT Covered under Invoice No. 0500100006557 delivered to M/s. SSE Corporation
In the Vehicle No. GJ08Y 5745

CMS/4CL

Signature valid
Digitally signed by BATA KRISHNA GIRI
Date: [illegible].19 16:37:43 IST

Dispatch Advice No.: 812162540 Dated: 17.04.2024 Wagon No: BOST/NCR/21131123420

Rourkela Steel Plant

24 hrs 20241190 81

STEEL AUTHORITY OF INDIA LIMITED
BHILAI STEEL PLANT
RESEARCH & CONTROL LAB (MECHANICAL TESTING LAB)

IS 2062

CM/L-0057534
MTL-WQR-2

TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Sold-to-Party:		T.C.No	: RCL/MTL/PLM/80605820
BM BSO AHMEDABAD		T.C. Date	: 21.07.2020
IST FLOOR		SALES ORDER NO	: 1100358746
AHMEDABAD LOCAL 380013		DA No	: 80605820
Ship-to-Party:			
WHM KHODIYAR,Gandhinagar.		Wagon No / Trailer No	ECOR10120640331

Process of Manufacture of Steel : Basic Oxygen Converter> Continuous Cast> Fully Killed Steel> Normalised

Specification : IS 2062 E 250 B0 : 2011 RA 2016

We certify that the material described below fully conforms to IS 2062 : 2011 RA 2016. Chemical composition and Mechanical properties of the product, as tested in accordance with the scheme of testing and inspection contained in the BIS certification mark Number CM/L 0057534 are as indicated against each Order No.

(Please refer to IS 2062 : 2011 RA 2016 for details of specification requirements)

TEST RESULTS

SECTION (NOMINAL SIZE)					MECHANICAL PROPERTIES									Bend Test	M Dia
THICK mm	WIDTH mm	LENGTH mm	Plate No / Pc. No.	Heat No	YS 240 MPa Min	UTS 410 MPa	%E Min23(5.65Sqrt(S0))	%El	CHARPY V NOTCH (L) Impact Values (J) I1	I2	I3	Iavg	°C		
28	2000	10000	2568552/1	306332	351	456	24	--	--	--	--	--	0	OK	3.0 T
				306332	345	457	25	--	82	80	84	82	0	OK	3.0 T
28	2000	10000	2568552/2	306332	--	--	--	--	--	--	--	--	--	--	--
25	2000	10000	2568553/1	306332	--	--	--	--	--	--	--	--	--	--	--
28	2000	10000	2568553/2	306332	--	--	--	--	--	--	--	--	--	--	--
28	2000	10000	2568554/2	306332	--	--	--	--	--	--	--	--	--	--	--
28	2000	10000	2568555/1	306332	--	--	--	--	--	--	--	--	--	--	--
28	2000	10000	2568555/2	306332	--	--	--	--	--	--	--	--	--	--	--

Heat No	C %	S %	P %	Mn %	Si %	Al %	Cu %	Cr %	Ni %	Mo %	Nb %	V %	Ti %	N2 ppm	B %	CE %
306332	0.18	0.020	0.021	0.92	0.27	0.010	< 0.02	< 0.015	< 0.015	< 0.015	< 0.010	< 0.010	< 0.005	--	< 0.0005	0.33

Total Pieces Page / Sales Order : 7 / 7 Total Pieces / TC : 15

Heat Treatment :Normalised,

Normalising: Temp Range: 920 - 950°C ; Soaking Time: 30 Minutes per 25mm thickness.

Ultrasonic Testing Level :ASTM A 435 Satisfactory & level of acceptance as per TDC.

The Material supplied conforms to the standard rolling and weight tolerences .

CE calculated by formula: [C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15].

Size of Impact test specimen:10x10x55 mm(above 10mm thickness) ; 7.5x10x55 mm(upto 10mm thickness).

Note: **M = Mandrel Dia, T = Plate Thickness. Length is the rolling direction of the plate.

TC as per BSEN 10204 Type 3.1.

SAIL WAREHOUSE, KHODIYAR
This Test Certificate ...
for ...
Invoice No. ...
Dated ...
is the ...

CMS/QCL

A L SAHU
Authorized Signatory
Research & Control Laboratory, Bhilai Steel Plant

Authorized Signatory
SAIL/CMO/BSO

67991372

STEEL AUTHORITY OF INDIA LIMITED
BHILAI STEEL PLANT
RESEARCH & CONTROL LAB (MECHANICAL TESTING LAB)

सेल SAIL

TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

CM/L-0057534
MTL-WCR-2

Sold-to-Party
BM BSO AHMEDABAD
IST FLOOR
AHMEDABAD LOCAL 380013
Ship-to-Party
WHM KHODIYAR,Gandhinagar

T.C.No : RCL/MTL/PLM/80605797
T.C. Date : 20.07.2020
SALES ORDER NO : 1100336746
DA No : 80605797
Wagon No / Trailer No : BEC1914045133?

Process of Manufacture of Steel : Basic Oxygen Converter> Continuous Cast> Fully Killed Steel> Normalised

Specification : IS 2062 E 250 B0 : 2011 RA 2016

We certify that the material described below fully conforms to IS 2062 : 2011 RA 2016. Chemical composition and Mechanical properties of the product, as tested in accordance with the scheme of testing and inspection contained in the BIS certification mark Number CM/L 0057534 are as indicated against each Order No.
(Please refer to IS 2062 : 2011 RA 2016 for details of specification requirements)

TEST RESULTS

SECTION (NOMINAL SIZE)			Plate No / Pc. No.	Heat No	MECHANICAL PROPERTIES									Bend Test	M.Q.P.
THICK.	WIDTH	LENGTH			YS	UTS	%E	%E2	CHARPY V NOTCH (L) Impact Values (J)						
mm	mm	mm			240 MPa Min	410 MPa	Min23(5.6 55sqrt(S0)		I1	I2	I3	Iavg.	°C		
25	2000	10000	25685541	306332	351	458	24	–	–	–	–	–	0	OK	3.0 T
				306332	345	457	25	–	82	80	84	82	0	OK	3.0 T

Heat No	CHEMICAL COMPOSITION (LADLE ANALYSIS)															
	C	S	P	Mn	Si	Al	Cu	Cr	Ni	Mo	Nb	V	Ti	N_2	B	CE
	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	%	%
306332	0.18	0.020	0.021	0.62	0.27	0.018	< 0.02	< 0.01b	< 0.01b	< 0.01b	< 0.010	< 0.010	< 0.005	–	< 0.0005	0.33

Total Pieces/ Page / Sales Order : 1 / 1 Total Pieces / TC : 19

Heat Treatment :Normalised,
Normalizing: Temp Range: 920 - 950°C ; Soaking Time: 30 Minutes per 25mm thickness.
Ultrasonic Testing Level :ASTM A 435 Satisfactory & level of acceptance as per TDC
The material supplied conforms to the standard rolling and weight tolerances.
CE calculated by formula: [C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15].
Size of impact test specimen:10x10x55 mm(above 10mm thickness) ; 7.5x10x55 mm(upto 10mm thickness).
Note : * M = Mandrel Dia, T = Plate Thickness, Length is the rolling direction of the plate
TC as per BSEN 10204 Type 3.1.

A L SAHU
Authorized Signatory
Research & Control Laboratory, Bhilai Steel Plant

Authorised Signatory
SAIL/ CMO/ BSO

6798/372

सेल SAIL

RESEARCH & CONTROL LAB (MECHANICAL TESTING LAB)

TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STR... STEEL

Sold-to-Party:
BM BSO AHMEDABAD
IST FLOOR
AHMEDABAD LOCAL 380013
Ship-to-Party:
CENTRAL MARKETING ORG SAIL,Ahmedabad.

T.C.No : RCL/MT/PLM/80813550
T.C. Date : 13.05.202[illegible]
SALES ORDER NO : 1100[illegible]
DA No : 8081350[illegible]

Process of Manufacture of Steel : Basic Oxygen Converter> Continuous Cast> Fully Killed Steel> SAIL> Normalising...
Wagon No / Trailer No : 5E550[illegible]

Specification : IS 2062 E 250 B0 : 2011 RA 2021

We certify that the material described below fully conforms to IS 2062 : 2011 RA 2021. Chemical composition and Me... tested in accordance with the scheme of testing and inspection contained in the BIS certification mark Number CM/L 03... Order No.

(Please refer to IS 2062 : 2011 RA 2021 for details of specification requirements)

TEST RESULTS

SECTION (NOMINAL SIZE) THICK mm	WIDTH mm	LENGTH mm	Plate No / Po. No.	Heat No	YS 250 MPa Min	UTS 410 MPa	%E Min23(5.65√So)	%E2	CHARPY V NOTCH (L) Imp... I1	I2	I3
16	2500	10000	3177455/2	379577	322	458	28	—	66	62	70
				379577	323	451	26	—	—	—	—
16	2500	10000	3181340/1	380058	328	480	28	—	62	62	64
				380058	322	474	26	—	—	—	—
16	2500	10000	3181343/1	380056	—	—	—	—	—	—	—

CHEMICAL COMPOSITION (LADLE ANALYSIS)

Heat No	C %	S %	P %	Mn %	Si %	Al %	Cu %	Cr %	Ni %	Mo %	Nb %	V %	[illegible] %
379577	0.14	0.018	0.033	0.85	0.24	0.019	< 0.02	0.030	< 0.015	< 0.015	< 0.010	< 0.010	< [illegible]
380056	0.15	0.029	0.019	0.79	0.19	0.024	< 0.02	< 0.015	< 0.015	< 0.015	< 0.010	< 0.010	< [illegible]

Total Pieces Page / Sales Order : 3 / 3 Total Pieces / TC : 15

Ultrasonic Testing Level : ASTM A 435 Satisfactory & level of acceptance as per TDC.
The Material supplied conforms to the standard rolling and weight tolerances.
CE calculated by formula: [C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15].
Size of impact test specimen: 10x10x55 mm(above 10mm thickness) ; 7.5x10x55 mm(upto 10mm thickness).
Note:**M = Mandrel Dia, T = Plate Thickness; Length is the rolling direction of the plate,
TC as per BSEN 10204 Type 3.1.

SAIL WAREHOUSE, SACHANA
This Test Certificate has been issued for____________MT Covered under Invoice No.______________delivered to M/s.________________________ In the Vehicle No.______________

CMO/GCL

Signature...
Digitally si...
Date: 202...
Reason: A...

Authorised Signatory
SAIL/ CMO/ BSO

Authorised ...
Research & Control Labo...

6797137?

4x12.2m W?9

8/3/05 2024178

(10)

STEEL AUTHORITY OF INDIA LIMITED
BHILAI STEEL PLANT
RESEARCH & CONTROL LAB (MECHANICAL TESTING LAB)

सेल SAIL

IS : 2062

TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

CM/L-0057534
MTL-II/QR-2

Sold-to-Party:
BM BSO AHMEDABAD
IST FLOOR
AHMEDABAD LOCAL 380013

T.C.No : RCL/MTL/PLM/80812306
T.C. Date : 01.05.2024
SALES ORDER NO : 1100500005
DA No : **80812306**

Ship-to-Party:
CENTRAL MARKETING ORG SAIL,Ahmedabad

Wagon No / Trailer No : CR21011811232

Process of Manufacture of Steel : Basic Oxygen Converter> Continuous Cast> Fully Killed Steel> SiAlK > Normalising Rolling

Specification : IS 2062 E 250 B0 : 2011 RA 2021

We certify that the material described below fully conforms to IS 2062 : 2011 RA 2021. Chemical composition and Mechanical properties of the product, as tested in accordance with the scheme of testing and inspection contained in the BIS certification mark Number CM/L 0057534 are as indicated against each Order No.

(Please refer to IS 2062 : 2011 RA 2021 for details of specification requirements)

TEST RESULTS

SECTION (NOMINAL SIZE) THICK mm	WIDTH mm	LENGTH mm	Plate No / Pc. No.	Heat No	YS 250 MPa Min	UTS 410 MPa	%E Min23(5.65Sqrt(S0))	%E2	CHARPY V NOTCH (L) Impact Values (J) I1	I2	I3	Iavg	°C	Bend Test	M Dia
16	2500	10000	3177571/2	379522 ✓	316	451	26	–	72	74	68	71	0	OK	2.0 T
				379522	319	455	25	–	–	–	–	–	–	OK	2.0 T
16	2500	10000	3177575/2	379522 ✓	–	–	–	–	–	–	–	–	–	–	–
16	2500	10000	3181341/1	380056 ✓	328	480	28	–	62	68	64	65	0	OK	2.0 T
				380056	322	474	26	–	–	–	–	–	–	OK	2.0 T

CHEMICAL COMPOSITION (LADLE ANALYSIS)

Heat No	C %	S %	P %	Mn %	Si %	Al %	Cu %	Cr %	Ni %	Mo %	Nb %	V %	Ti %	N2 ppm	B %	CE %
379522	0.16	0.019	0.023	0.84	0.19	0.017	< 0.02	< 0.015	< 0.015	< 0.015	< 0.010	< 0.010	< 0.005	–	< 0.0005	0.30
380056	0.15	0.028	0.019	0.79	0.10	0.024	< 0.02	< 0.015	< 0.015	< 0.015	< 0.010	< 0.010	< 0.005	–	< 0.0005	0.28

Total Pieces Page / Sales Order : 3 / 3 Total Pieces / TC : 14

Ultrasonic Testing Level :ASTM A 435 Satisfactory & level of acceptance as per TDC.
The Material supplied conforms to the standard rolling and weight tolerances.
CE calculated by formula: [C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15].
Size of impact test specimen:10x10x55 mm(above 10mm thickness) ; 7.5x10x55 mm(upto 10mm thickness).
Note: * M = Mandrel Dia, T = Plate Thickness, Length is the rolling direction of the plate.
TC as per BSEN 10204 Type 3.1.

9.306
Q500|000631
FA & CAO
GJ05BV2384

CM/QCL

Signature Not Verified
Digitally signed by S.RAJU
Date: 2024.05.01 10:38:28 IST
Reason: Authorized Signatory RCL, BSP

Authorised Signatory
SAIL/ CMO/ BSO

Authorized Signatory
Research & Control Laboratory, Bhilai Steel Plant

6794132

4x12.2m W04

STEEL AUTHORITY OF INDIA LIMITED
BHILAI STEEL PLANT
RESEARCH & CONTROL LAB (MECHANICAL TESTING LAB)

IS : 2062

TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

CM/L-0057534
MTL-B/QR-2

Sold-to-Party:
BM BSO AHMEDABAD
IST FLOOR
AHMEDABAD LOCAL 380013
Ship-to-Party:
CENTRAL MARKETING ORG SAIL,Ahmedabad.

T.C.No : RCL/MTL/PLM/62006045
T.C. Date : 29.04.2024
SALES ORDER NO : 1100500005
DA No : **62006045**

Wagon No / Trailer No : SCR5090260063

Process of Manufacture of Steel : Basic Oxygen Converter> Continuous Cast> Fully Killed Steel> SAIK > Normalising Rolling

Specification : IS 2062 E 250 B0 : 2011 RA 2021

We certify that the material described below fully conforms to IS 2062 : 2011 RA 2021. Chemical composition and Mechanical properties of the product, as tested in accordance with the scheme of testing and inspection contained in the BIS certification mark Number CM/L 0057534 are as indicated against each Order No.

(Please refer to IS 2062 : 2011 RA 2021 for details of specification requirements)

TEST RESULTS

SECTION (NOMINAL SIZE)			Plate No / Pc. No.	Heat No	MECHANICAL PROPERTIES									Bend Test	M Dia
THICK. mm	WIDTH mm	LENGTH mm			YS 250 MPa Min	UTS 410 MPa	%E Min23(5.65 √Sqrt(So))	%E2	CHARPY V NOTCH (L) Impact Values (J)						
									I1	I2	I3	Iavg	°C		
16	2500	10000	3176710/1	379517	327	482	26	--	--	--	--	--	0	OK	2.0 T
				379517	343	487	25	--	44	54	44	47	0	OK	2.0 T
16	2500	10000	3176710/2	379517	--	--	--	--	--	--	--	--	--	--	--
16	2500	10000	3176712/2	379517	--	--	--	--	--	--	--	--	--	--	--
16	2500	10000	3176714/2	379517	--	--	--	--	--	--	--	--	--	--	--
16	2500	10000	3176716/1	379517	--	--	--	--	--	--	--	--	--	--	--
16	2500	10000	3176716/1	379517	--	--	--	--	--	--	--	--	--	--	--
16	2500	10000	3176721/1	379517	--	--	--	--	--	--	--	--	--	--	--
16	2500	10000	3176729/1	379518	311	458	28	--	--	--	--	--	0	OK	2.0 T
				379518	324	471	26	--	90	94	104	96	0	OK	2.0 T
16	2500	10000	3176729/2	379518	--	--	--	--	--	--	--	--	--	--	--
16	2500	10000	3176739/1	379518	--	--	--	--	--	--	--	--	--	--	--
16	2500	10000	3176739/2	379518	--	--	--	--	--	--	--	--	--	--	--

Heat No	CHEMICAL COMPOSITION (LADLE ANALYSIS)															
	C %	S %	P %	Mn %	Si %	Al %	Cu %	Cr %	Ni %	Mo %	Nb %	V %	Ti %	N_2 ppm	B %	CE %
379517	0.16	0.025	0.022	0.80	0.17	0.020	< 0.02	0.020	< 0.015	< 0.015	< 0.010	< 0.010	< 0.005	--	< 0.0005	0.29
379518	0.15	0.019	0.018	0.80	0.16	0.020	< 0.02	< 0.015	< 0.015	< 0.015	< 0.010	< 0.010	< 0.005	--	< 0.0005	0.28

Total Pieces Page / Sales Order : 11 / 11 Total Pieces / TC : 17

Ultrasonic Testing Level :ASTM A 435 Satisfactory & level of acceptance as per TDC.

The Material supplied conforms to the standard rolling and weight tolerances.

CMS/QCL

Signature valid
Digitally signed by [illegible]
Date: 2024.04.29 [illegible] IST
Reason: Authorized Signatory RCL, BSP

Authorised Signatory
SAIL/ CMO/ BSO

Authorized Signatory
Research & Control Laboratory, Bhilai Steel Plant

67971372 4x12.2 m WPG

STEEL AUTHORITY OF INDIA LIMITED
BHILAI STEEL PLANT
RESEARCH & CONTROL LAB (MECHANICAL TESTING LAB)

IS : 2062

CM/L-0057534
MTL-II/QR-2

TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Sold-to-Party:
BM BSO AHMEDABAD
IST FLOOR
AHMEDABAD LOCAL 380013
Ship-to-Party:
CENTRAL MARKETING ORG SAIL,Ahmedabad.

T.C.No : RCL/MTL/PLM/62006045
T.C. Date : 29.04.2024
SALES ORDER NO : 1100500085
DA No : **62006045**

Wagon No / Trailer No : SCRS50902600G3

Process of Manufacture of Steel : Basic Oxygen Converter> Continuous Cast> Fully Killed Steel> SiAlK > Normalising Rolling

Specification : IS 2062 E 250 B0 : 2011 RA 2021

CE calculated by formula: [C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15].
Size of impact test specimen:10x10x55 mm(above 10mm thickness) ; 7.5x10x55 mm(upto 10mm thickness),
Note:** M = Mandrel Dia, T = Plate Thickness, Length is the rolling direction of the plate.
TC as per BSEN 10204 Type 3.1,

SAIL WAREHOUSE, SACHANA
This Test Certificate has been issued for_____MT Covered under Invoice No._____delivered to M/s._____
In the Vehicle No._____

Signature valid
Digitally signed by S AIJU
Date: 2024.04.29 [illegible]:37:46 IST
Reason: Authorised Signatory RCL, BSP

Authorized Signatory
Research & Control Laboratory, Bhilai Steel Plant

CMS/QCL

Authorised Signatory
SAIL/ CMO/ BSO

STEEL AUTHORITY OF INDIA LIMITED
BHILAI STEEL PLANT
RESEARCH & CONTROL LAB (MECHANICAL TESTING LAB)

IS : 2062

CM/L-0057534
MTL-WQR-2

TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Sold-to-Party:
BM BSO AHMEDABAD
IST FLOOR
AHMEDABAD LOCAL 380013
Ship-to-Party:
CENTRAL MARKETING ORG SAIL Ahmedabad.

T.C.No : RCL/MTL/PLM/62006044
T.C. Date : 29.04.2024
SALES ORDER NO : 1100500005
DA No : **62006044**

Wagon No / Trailer No : SECR57140323957

Process of Manufacture of Steel : Basic Oxygen Converter> Continuous Cast> Fully Killed Steel> SiAlK > Normalising Rolling

Specification : IS 2062 E 250 B0 : 2011 RA 2021

We certify that the material described below fully conforms to IS 2062 : 2011 RA 2021. Chemical composition and Mechanical properties of the product, as tested in accordance with the scheme of testing and inspection contained in the BIS certification mark Number CM/L 0057534 are as indicated against each Order No.
(Please refer to IS 2062 : 2011 RA 2021 for details of specification requirements)

TEST RESULTS

SECTION (NOMINAL SIZE)			Plate No / Pc. No.	Heat No	MECHANICAL PROPERTIES									Bend Test	M Dia
THICK	WIDTH	LENGTH			YS	UTS	%E	%E2	CHARPY V NOTCH (L) Impact Values (J)						
mm	mm	mm			250 MPa Min	410 MPa	Min23[0.6 5Sqrt(50)]		I1	I2	I3	Iavg	°C		
16	2500	10000	3176716/2	379517	327	482	26	--	--	--	--	--	0	OK	2.0 T
				379517	343	487	25	--	44	54	44	47	0	OK	2.0 T
16	2500	10000	3176730/1	379518	311	458	28	--	--	--	--	--	0	OK	2.0 T
				379518	324	471	26	--	80	94	104	96	0	OK	2.0 T
16	2500	10000	3176730/2	379518	--	--	--	--	--	--	--	--	--	--	--

Heat No	CHEMICAL COMPOSITION (LADLE ANALYSIS)															
	C	S	P	Mn	Si	Al	Cu	Cr	Ni	Mo	Nb	V	Ti	N2	B	CE
	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	%	%
379517	0.16	0.025	0.022	0.80	0.17	0.020	< 0.02	0.020	< 0.015	< 0.015	< 0.010	< 0.010	< 0.015	--	< 0.0005	0.29
379518	0.15	0.018	0.018	0.80	0.16	0.020	< 0.02	< 0.015	< 0.015	< 0.015	< 0.010	< 0.010	< 0.005	--	< 0.0005	0.28

Total Pieces Page / Sales Order : 3 / 3 Total Pieces / TC : 14

Ultrasonic Testing Level : ASTM A 435 Satisfactory & level of acceptance as per TDC.
The Material supplied conforms to the standard rolling and weight tolerances.
CE calculated by formula: [C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15].
Size of impact test specimen; 10x10x55 mm(above 10mm thickness) ; 7.5x10x55 mm(upto 10mm thickness).
Note:** M = Mandrel Dia, T = Plate Thickness, Length is the rolling direction of the plate.
TC as per BSEN 10204 Type 3.1.

SAIL WAREHOUSE, SACHANA
This Test Certificate has been issued for _____ MT Covered under Invoice No._____ delivered
to M/s._____
in the Vehicle No._____

cms/qc

Signature valid
Digitally signed by S[illegible]AIJU
Date: 2024.0[illegible]36:40 IST
Reason: Authorized Signatory RCL, BSP

Authorised Signatory
SAIL CMO/ BSO

Authorized Signatory
Research & Control Laboratory, Bhilai Steel Plant

679713372 4x12.2 m wpg

STEEL AUTHORITY OF INDIA LIMITED
ROURKELA STEEL PLANT
ROURKELA - 769011 (ODISHA)
RESEARCH AND CONTROL LABORATORY

Test Certificate For: HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 700658 | **Dated: 12.01.2024** | **Product: PM Plate**

To : CENTRAL MARKETING ORG SAIL SAIL ,CA WAREHOUSE VIRAMGAM 382150

It is cerified that the materials described below fully conforms to IS 2062 - 2011. The chemical composition and Mechanical properties of the product as tested in accordance with the scheme of Testing and Inspection contained in BIS Certification marks License No CM/L 0000053223 are as indicated against each order. The material supplied conforms to standard Rolling and weight tolerances. (PLEASE REFER TO IS 2062 - 2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

Ladle Analysis

Cast No	C%	Mn%	P%	S%	Si%	Al%	CE	RHOB
2322464	0.1800	1.0000	0.0240	0.0220	0.1820	0.0320	0.3470	N
2322583	0.1700	1.0100	0.0220	0.0200	0.1630	0.0340	0.3360	N
2322586	0.1780	0.9410	0.0210	0.0150	0.1900	0.0230	0.3350	N
2322589	0.1400	0.9600	0.0180	0.0180	0.1720	0.0320	0.3000	N
2322592	0.1700	0.9600	0.0180	0.0160	0.1890	0.0470	0.3300	N

Sl. No.	MP / SO No.	Cast / Batch No.	Size(mm) (TxWxL)	No of Piece(s)	Grade / Mode Of Killing	YS	UTS	El	Bend Test	Supply Cond	UST	CVN (1)	CVN (2)	CVN (3)	CVN at 0 degC (Avg)
						(MPa)	(MPa)	(%)			(AS TM)	(J)	(J)	(J)	(J)
1	1400761829	2322464 / CC14818111	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	283	450	29	OK	NR	435	56	56	62	58
						290	447	27	OK						
2	1400761829	2322464 / CC14818112	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	283	450	29	OK	NR	435	56	56	62	58
						290	447	27	OK						
3	1400761829	2322464 / CC14818161	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	283	450	29	OK	NR	435	56	56	62	58
						290	447	27	OK						
4	1400761829	2322464 / CC14818162	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	283	450	29	OK	NR	435	56	56	62	58
						290	447	27	OK						
5	1400761829	2322583 / CC14818232	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	285	449	27	OK	NR	435	56	56	54	55

Dispatch Advice No.: 812158521 Dated: 09.01.2024 Wagon No: BOST/ECOR/21120937373

Rourkela Steel Plant

STEEL AUTHORITY OF INDIA LIMITED
ROURKELA STEEL PLANT
ROURKELA - 769011 (ODISHA)
RESEARCH AND CONTROL LABORATORY

Test Certificate For: HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 700658 | **Dated: 12.01.2024** | **Product: PM Plate**

To : CENTRAL MARKETING ORG SAIL SAIL ,CA WAREHOUSE VIRAMGAM 382150

Sl. No.	MP / SO No.	Cast / Batch No.	Size(mm) (TxWxL)	No of Piece(s)	Grade / Mode Of Killing	YS	UTS	El	Bend Test	SupplyCond	UST	CVN (1)	CVN (2)	CVN (3)	CVN at 0 degC (Avg)	
						(MPa)	(MPa)	(%)			(ASTM)	(J)	(J)	(J)	(J)	
6	1400761829	2322583 / CC14818241	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	290	449	28	OK							
						285	449	27	OK	NR	435	56	56	54	55	
7	1400761829	2322583 / CC14818242	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	290	449	28	OK							
						285	449	27	OK	NR	435	56	56	54	55	
8	1400761829	2322583 / CC14818251	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	290	449	28	OK							
						285	449	27	OK	NR	435	56	56	54	55	
9	1400761829	2322583 / CC14818252	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	290	449	28	OK							
						285	449	27	OK	NR	435	56	56	54	55	
10	1400761829	2322589 / CC14818261	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	290	449	28	OK							
						295	449	28	OK	NR	435	60	62	56	59	
11	1400761829	2322589 / CC14818262	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	294	447	29	OK							
						294	447	29	OK	NR	435	60	62	58	59	
12	1400761829	2322583 / CC14818281	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	294	447	29	OK							
						285	449	27	OK	NR	435	56	56	54	55	
13	1400761829	2322583 / CC14818282	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	290	449	28	OK							
						285	449	27	OK	NR	435	56	56	54	55	
14	1400761829	2322583 / CC14818291	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	290	449	28	OK							
						285	449	27	OK	NR	435	56	56	54	56	
15	1400761829	2322592 / CC14818301	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	290	449	28	OK							
						295	449	28	OK	NR	435	56	56	60	57	

Dispatch Advice No.: 812158521 **Dated: 09.01.2024** **Wagon No: BOST/ECOR/21120937373**

Rourkela Steel Plant

SAIL

STEEL AUTHORITY OF INDIA LIMITED
ROURKELA STEEL PLANT
ROURKELA - 769011 (ODISHA)
RESEARCH AND CONTROL LABORATORY

IS 2062

Test Certificate For: HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 700658 | Dated: 12.01.2024 | Product: PM Plate

To : CENTRAL MARKETING ORG SAIL SAIL ,CA WAREHOUSE VIRAMGAM 382150

Sl. No.	MP / SO No.	Cast / Batch No.	Size(mm) (TxWxL)	No of Piece(s)	Grade / Mode Of Killing	YS	UTS	El	Bend Test	Suppl yCond	UST	CVN (1)	CVN (2)	CVN (3)	CVN at 0 degC (Avg)	
						(MPa)	(MPa)	(%)			(AS TM)	(J)	(J)	(J)	(J)	
16	1400761829	2322592 / CC14818302	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	290	447	29	OK							
17	1400761829	2322586 / CC14818361	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	295	449	28	OK	NR	435	56	56	60	57	
18	1400761829	2322586 / CC14818362	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	290	447	29	OK							
19	1400761829	2322586 / CC14818371	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	286	456	30	OK	NR	435	60	52	52	55	
20	1400761829	2322586 / CC14818372	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	282	452	30	OK							
21	1400761829	2322589 / CC14818381	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	286	456	30	OK	NR	435	60	52	52	55	
22	1400761829	2322589 / CC14818391	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	282	452	30	OK							
23	1400761829	2322589 / CC14818392	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	282	452	30	OK	NR	435	60	52	56	56	
24	1400761829	2322586 / CC14818402	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	296	449	28	OK							
25	1400761829	2322583 / CC14818481	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	294	447	29	OK	NR	435	60	52	56	59	
						295	449	28	OK							
						294	447	29	OK	NR	435	60	62	56	59	
						295	449	28	OK							
						294	447	29	OK	NR	435	60	52	56	59	
						296	456	30	OK							
						282	452	30	OK	NR	435	60	52	52	55	
						285	449	27	OK	NR	435	56	56	54	55	

Dispatch Advice No.: 812158521 Dated: 09.01.2024 Wagon No: BOST/ECOR/21120937373

Rourkela Steel Plant

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IS 2062

STEEL AUTHORITY OF INDIA LIMITED
ROURKELA STEEL PLANT
ROURKELA - 769011 (ODISHA)
RESEARCH AND CONTROL LABORATORY

Test Certificate For: HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 700658 | Dated: 12.01.2024 | Product: PM Plate

To : CENTRAL MARKETING ORG SAIL SAIL ,CA WAREHOUSE VIRAMGAM 382150

Sl. No.	MP / SO No.	Cast / Batch No.	Size(mm) (TxWxL)	No of Piece(s)	Grade / Mode Of Killing	YS	UTS	El	Bend Test	SupplyCond	UST	CVN (1)	CVN (2)	CVN (3)	CVN at 0 degC (Avg)
						(MPa)	(MPa)	(%)			(ASTM)	(J)	(J)	(J)	(J)
26	1400761829	2322583 / CC14818482	12x2500x10000	1	IS 2062 E250BO / ALSIK / TRIM	290	449	28	OK						
						285	449	27	OK	NR	435	56	56	54	55
						290	449	28	OK						

Total Pieces : 26 Total Weight(Tons) : 61.000

Remarks : PROCESS ROUTE - BOF-LHF-CC-PM

ALL PLATES ARE UST OK AS PER ASTM A 435 : SATISFACTORY & LEVEL OF ACCEPTANCE AS PER TDC .

ALL PLATES ARE NORMALISED ROLLED OK.

FERR GRAIN SIZE ASTM 5 OR FINER

MICROSTRUCTURE CONSISTS OF POLYGONAL GRAINS OF FERRITE & PEARLITE.

FERRITIC GS AS PER ASTM E112 @2 PER HEAT NUMBER .... FOR EACH HEAT MENTIONED

PLATES OF HEAT NUMBER .02322464,02322583,02322586,02322589,02322592..HAVE FERRITIC GRAIN SIZE 8.50 TO 9.00

SAIL WAREHOUSE, SACHANA
This Test Certificate has been issued
for 58.500 MT Covered under
invoice No. 8af000 989 delivered
to M/s. Saburi
In the Vehicle No. GJ12BW6139

Signature Not Verified
Digitally signed by BATA KRISHNA GIRI
Date: 2024.01.12 11:27:01 IST

Dispatch Advice No.: 812158521 Dated: 09.01.2024 Wagon No: BOST/ECOR/21120937373

Rourkela Steel Plant

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सेल SAIL

STEEL AUTHORITY OF INDIA LIMITED

SHREE PARASHNATH RE-ROOLLING MILLS LTD
3511 PART, Dist :PASCHIM BARDHAMAN, West Bengal
CA/WLA/SPU of SAIL for the year 2023-24

IS 2062:2011
CM/L-5254460

TEST CERTIFICATE

TEST CERTIFICATE FOR HOT ROLLED,MEDIUM & HIGH TENSILE STRUCTURAL STEEL

TC Number : SAIL/CMO/C443/TC_1000042
TC Date : 10.10.2023
To : M/s SSE(Y) / EW / WR / SBI
SABARMATI,Sabarmati,Gujarat,380005

We Certify that material described below fully conforms to IS 2062:2011,chemical composition & mechanical properties of the product in accordance with the scheme of testing and inspection contained in the BIS certification marks License No. CM/L-5254460 are as indicated below against each order no.
(PLEASE REFER TO IS 2062:2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

Order No. & date	*Nominal Size(mm)	CAST/ Lot No.	QUANTITY (MT)	Testing Date	CHEMICAL ANALYSIS							CE	Impact Test(J)	MECHANICAL PROPERTIES				
					C%	S%	P%	Si%	Mn%	Cu%	Other			YS Mpa	UTS Mpa	El%	Bend Test	
Requirement value as per IS 2062:2011, Grade Designation E250 Quality-B0				Min	-	-	-	-	-		-	-	27	250	410	23		
				Max	0.22	0.045	0.045	0.40	1.50			0.41		-	-	-	-	
3[illegible]1328 - 0[illegible].2023	ANGLE IS2062 E250B0 75*75*10	DC00707 890000508350	0.847	08.10.2023 to 08.10.2023	0.1700 to 0.2200	0.0220 to 0.0360	0.0230 to 0.0380	0.1800 to 0.2400	0.7300 to 1.3000			0.3200 to 0.4000	28.0000 to 44.0000	303.6000 to 372.220	500.0000 to 562.960	27.5500 to 32.8500	OK	IS 2062 E250B0
3[illegible]1328 - 0[illegible].2023	ANGLE IS2062 E250B0 75*75*10	DC00708 890000508351	39.123	08.10.2023 to 08.10.2023	0.1700 to 0.2200	0.0220 to 0.0360	0.0230 to 0.0380	0.1800 to 0.2400	0.7500 to 1.3000			0.3200 to 0.4000	28.0000 to 44.0000	303.6000 to 372.220	500.0000 to 562.960	27.5500 to 32.8500	OK	IS 2062 E250B0
TOTAL QUANTITY			39.970															
DOCUMENT NO.	9339603592																	
TRUCK / WAGON NO.	RJ05GB7218																	
Remarks:																		

Vikas Gulati / Vikas Gulati
निरीक्षण अभियंता / Inspecting Engineer
Authorised Signatory
राइट्स लिमिटेड / RITES Limited
पूर्वी क्षेत्र / Eastern Region
गुणवत्ता विभाग / QA Division
कोलकाता / Kolkata

Authorised Signatory
Quality Assurance

cms/qcc

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CALIBRATION CERTIFICATE OF MEASURING INSTRUMENTS

NCQC LABORATORY LLP

4, Abhishree Corporate Park, Nr. Swagat Bunglow BRTS,
Iskcon-Ambli Road, Ambli, Ahmedabad-380 058 • Ph. +91-79-29795322, 29795323,
Fax : +91-79-29795323, Cell No. +91-9327017517, +91-9328616370
E-mail : ncqc@calibrationlaboratory.in, • calibrationlab.ncqc@gmail.com
Visit our Web Site : www.calibrationlaboratory.in • LLP IN : ACH-9094 / GSTIN : 24AAWFN8511B1Z9

CC-2128

Precision Calibration Centre with National / International Traceability for Temperature, Dimensional, Pressure, Vacuum, Time, Mass, Electrical, Noise, Airflow, Lux & all Special Purpose Instruments in all ranges.

Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/19 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 1 of 2	
ULR – CC212825000000497F	**Discipline → Mechanical Calibration,** Dimension (Basic-Measuring Instrument, Gauges etc.)	
Details of Observation of Unit Under Calibration	Identification No. : **MT–01** Serial No. : ===== Name of Instrument : **Measuring Tape**	
Range Least Count	0 – 30000 mm. (30 Meter) 1 mm	Make / Model Visual Inspection GK FML/=== OK

Set Point On UUC in mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
100	100.012	0.012
200	200.025	0.025
500	500.031	0.031
1000	1000.045	0.045
2000	2000.068	0.068
3000	3000.079	0.079
4000	4000.084	0.084
5000	5000.079	0.079
6000	6000.086	0.086
7000	7000.091	0.091
8000	8000.103	0.103
9000	9000.123	0.123
10000	10000.119	0.119
11000	11000.153	0.153
12000	12000.167	0.167
13000	13000.186	0.186
14000	14000.203	0.203
15000	15000.209	0.209
16000	16000.215	0.215
17000	17000.216	0.216
18000	18000.226	0.226
19000	19000.234	0.234
20000	20000.251	0.251
21000	21000.279	0.279
22000	22000.292	0.292
23000	23000.301	0.301

Traceable To National / International Standards.

Calibrated By	**Maulik Rathod**	**Reviewed & Approved By**	**Jigar Panchal**

NCQC LABORATORY LLP

4, Abhishree Corporate Park, Nr. Swagat Bunglow BRTS,
Iskcon-Ambli Road, Ambli, Ahmedabad-380 058 • Ph. +91-79-29795322, 29795323,
Fax : +91-79-29795323, Cell No. +91-9327017517, +91-9328616370
E-mail : ncqc@calibrationlaboratory.in, • calibrationlab.ncqc@gmail.com
Visit our Web Site : www.calibrationlaboratory.in • LLP IN : ACH-9094 / GSTIN : 24AAWFN8511B1Z9

CC-2128

Precision Calibration Centre with National / International Traceability for Temperature, Dimensional, Pressure, Vacuum, Time, Mass, Electrical, Noise, Airflow, Lux & all Special Purpose Instruments in all ranges.

Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/19 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 2 of 2	

Details of Observation of Unit Under Calibration

Identification No. : **MT–01**
Serial No. : =====
Name of Instrument : **Measuring Tape**

Set Point On UUC in mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
24000	24000.301	0.301
25000	25000.316	0.316
26000	26000.319	0.319
27000	27000.325	0.325
28000	28000.334	0.334
29000	29000.345	0.345
30000	30000.351	0.351

Maximum Permissible error

Class	Maximum permissible error in mm
Class I	± (0.1 + 0.1 L)
Class II	± (0.3 + 0.2 L)
Class III	± (0.6 + 0.4 L)

Note Where 'L' is the value of the length in meter and rounded up to the nearest integral number of meters.

Remarks:

- Averages of minimum three readings are reported.
- After 1000 mm, the stepwise calibration of each 1000 mm is done with earlier pre-positioning with respect to initial zero.
- Suggested due is given based on customer requirement.
- Calibration points are given based on customer requirement.
- These results are obtained at the time of calibration.
- Any hand written corrections (except @ marked) or photocopies of the report invalidates this certificate.
- Uncertainty of measurement at 95% confidence level is ± 134 x √L µm (L in meter) at coverage factor k = 2.
- Environment condition during calibration: 20 ± 2°C, 40 to 60% Rh.
- Average temperature → 20.7 °C and average humidity 48.3 % Rh during calibration of instruments.
- No external provider was used for calibration and hence it is not applicable.
- Result relates to the item calibrated only.
- Calibration certificate shall not be reproduced except in full without written approval of Director, NCQC.
- Reference standard no.: IS 1269 (Part–1) for woven metallic and glass fibre tape and IS 1269 (Part–2) steel tape measure.
- Condition of instrument found satisfactory during receipt.
- Location of performance of calibration → At Lab.
- Reference calibration method no.: NCQC/CM/M/035.
- Our masters are directly calibrated through NABL accredited calibration laboratory having direct Traceability with national / international standard.

Details of Master Instrument Used for Calibration

Nomenclature	Make / Model	Id. No. / Sr. No.	Calibration Due Date
Tape & scale Measuring M/C	Octagon / MSTC – 1000	NCQC/M – 23 / 027	30-08-2025

NCQC System Certificate No.	Certificate no. & Traceability of master with National Standards
155	↪ Our master Tape & Scale Measuring Machine is in-house calibrated and traceable to National Standard through NABL accredited Laboratory as per Certificate no. NCQC-M/310824/001, Date-31-08-2024.

Traceable To National / International Standards.

Calibrated By	Maulik Rathod	Reviewed & Approved By	Jigar Panchal

NCQC LABORATORY LLP

4, Abhishree Corporate Park, Nr. Swagat Bunglow BRTS,
Iskcon-Ambli Road, Ambli, Ahmedabad-380 058 • Ph. +91-79-29795322, 29795323,
Fax : +91-79-29795323, Cell No. +91-9327017517, +91-9328616370
E-mail : ncqc@calibrationlaboratory.in, • calibrationlab.ncqc@gmail.com
Visit our Web Site : www.calibrationlaboratory.in • LLP IN : ACH-9094 / GSTIN : 24AAWFN8511B1Z9

CC-2128

Precision Calibration Centre with National / International Traceability for Temperature, Dimensional, Pressure, Vacuum, Time, Mass, Electrical, Noise, Airflow, Lux & all Special Purpose Instruments in all ranges.

Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/20 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 1 of 2	
ULR – CC212825000000498F	**Discipline → Mechanical Calibration,** Dimension (Basic-Measuring Instrument, Gauges etc.)	
Details of Observation of Unit Under Calibration	Identification No. : **MT–02** Serial No. : ===== Name of Instrument : **Measuring Tape**	

Range Least Count	0 – 30000 mm. (30 Meter) 1 mm	Make / Model Visual Inspection	Freemans/=== OK

Set Point On UUC in mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
100	100.018	0.018
200	200.019	0.019
500	500.025	0.025
1000	1000.032	0.032
2000	2000.036	0.036
3000	3000.045	0.045
4000	4000.053	0.053
5000	5000.064	0.064
6000	6000.049	0.049
7000	7000.068	0.068
8000	8000.079	0.079
9000	9000.081	0.081
10000	10000.086	0.086
11000	11000.087	0.087
12000	12000.098	0.098
13000	13000.081	0.081
14000	14000.103	0.103
15000	15000.124	0.124
16000	16000.135	0.135
17000	17000.146	0.146
18000	18000.157	0.157
19000	19000.168	0.168
20000	20000.178	0.178
21000	21000.185	0.185
22000	22000.183	0.183
23000	23000.203	0.203

Traceable To National / International Standards.

Calibrated By	**Maulik Rathod**	**Reviewed & Approved By**	**Jigar Panchal**

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/20 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 2 of 2	

Details of Observation of Unit Under Calibration

Identification No. : **MT–02**
Serial No. : =====
Name of Instrument : **Measuring Tape**

Set Point On UUC in mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
24000	24000.219	0.219
25000	25000.225	0.225
26000	26000.234	0.234
27000	27000.267	0.267
28000	28000.259	0.259
29000	29000.271	0.271
30000	30000.343	0.343

Maximum Permissible error

Class	Maximum permissible error in mm
Class I	± (0.1 + 0.1 L)
Class II	± (0.3 + 0.2 L)
Class III	± (0.6 + 0.4 L)

Note Where 'L' is the value of the length in meter and rounded up to the nearest integral number of meters.

Remarks:

- Averages of minimum three readings are reported.
- After 1000 mm, the stepwise calibration of each 1000 mm is done with earlier pre-positioning with respect to initial zero.
- Suggested due is given based on customer requirement.
- Calibration points are given based on customer requirement.
- These results are obtained at the time of calibration.
- Any hand written corrections (except @ marked) or photocopies of the report invalidates this certificate.
- Uncertainty of measurement at 95% confidence level is ± 134 x √L µm (L in meter) at coverage factor k = 2.
- Environment condition during calibration: 20 ± 2°C, 40 to 60% Rh.
- Average temperature → 20.7 °C and average humidity 48.3 % Rh during calibration of instruments.
- No external provider was used for calibration and hence it is not applicable.
- Result relates to the item calibrated only.
- Calibration certificate shall not be reproduced except in full without written approval of Director, NCQC.
- Reference standard no.: IS 1269 (Part–1) for woven metallic and glass fibre tape and IS 1269 (Part–2) steel tape measure.
- Condition of instrument found satisfactory during receipt.
- Location of performance of calibration → At Lab.
- Reference calibration method no.: NCQC/CM/M/035.
- Our masters are directly calibrated through NABL accredited calibration laboratory having direct Traceability with national / international standard.

Details of Master Instrument Used for Calibration

Nomenclature	Make / Model	Id. No. / Sr. No.	Calibration Due Date
Tape & scale Measuring M/C	Octagon / MSTC-1000	NCQC/M – 23 / 027	30-08-2025

NCQC System Certificate No.	Certificate no. & Traceability of master with National Standards
155	↪ Our master Tape & Scale Measuring Machine is in-house calibrated and traceable to National Standard through NABL accredited Laboratory as per Certificate no. NCQC-M/310824/001, Date-31-08-2024.

Traceable To National / International Standards.

Calibrated By Maulik Rathod | **Reviewed & Approved By** Jigar Panchal

NCQC LABORATORY LLP

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/21 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 1 of 2	
ULR – CC212825000000499F	**Discipline → Mechanical Calibration,** Dimension (Basic-Measuring Instrument, Gauges etc.)	
Details of Observation of Unit Under Calibration	Identification No. : **MT–03** Serial No. : **=====** Name of Instrument : **Measuring Tape**	

Range Least Count	0 – 30000 mm. (30 Meter) 1 mm	Make / Model Visual Inspection	Freemans/=== OK

Set Point On UUC in mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
100	100.013	0.025
200	200.026	0.035
500	500.047	0.053
1000	1000.076	0.076
2000	2000.085	0.085
3000	3000.092	0.092
4000	4000.103	0.103
5000	5000.124	0.124
6000	6000.135	0.135
7000	7000.148	0.148
8000	8000.156	0.156
9000	9000.168	0.168
10000	10000.179	0.179
11000	11000.185	0.185
12000	12000.196	0.196
13000	13000.203	0.203
14000	14000.213	0.213
15000	15000.225	0.225
16000	16000.210	0.210
17000	17000.219	0.219
18000	18000.235	0.235
19000	19000.246	0.246
20000	20000.253	0.253
21000	21000.267	0.267
22000	22000.279	0.279
23000	23000.295	0.295

Traceable To National / International Standards.

Calibrated By	**Maulik Rathod**	**Reviewed & Approved By**	**Jigar Panchal**

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/21 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 2 of 2	

Details of Observation of Unit Under Calibration

Identification No. : **MT–03**
Serial No. : =====
Name of Instrument : **Measuring Tape**

Set Point On UUC in mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
24000	24000.259	0.259
25000	25000.263	0.263
26000	26000.272	0.272
27000	27000.295	0.295
28000	28000.301	0.301
29000	29000.315	0.315
30000	30000.326	0.326

Maximum Permissible error

Class	Maximum permissible error In mm
Class I	± (0.1 + 0.1 L)
Class II	± (0.3 + 0.2 L)
Class III	± (0.6 + 0.4 L)

Note Where 'L' is the value of the length in meter and rounded up to the nearest integral number of meters.

Remarks:

- Averages of minimum three readings are reported.
- After 1000 mm, the stepwise calibration of each 1000 mm is done with earlier pre-positioning with respect to initial zero.
- Suggested due is given based on customer requirement.
- Calibration points are given based on customer requirement.
- These results are obtained at the time of calibration.
- Any hand written corrections (except @ marked) or photocopies of the report invalidates this certificate.
- Uncertainty of measurement at 95% confidence level is ± 134 x √L µm (L in meter) at coverage factor k = 2.
- Environment condition during calibration: 20 ± 2°C, 40 to 60% Rh.
- Average temperature → 20.6 °C and average humidity 48.6 % Rh during calibration of instruments.
- No external provider was used for calibration and hence it is not applicable.
- Result relates to the item calibrated only.
- Calibration certificate shall not be reproduced except in full without written approval of Director, NCQC.
- Reference standard no.: IS 1269 (Part–1) for woven metallic and glass fibre tape and IS 1269 (Part–2) steel tape measure.
- Condition of instrument found satisfactory during receipt.
- Location of performance of calibration → At Lab.
- Reference calibration method no.: NCQC/CM/M/035.
- Our masters are directly calibrated through NABL accredited calibration laboratory having direct Traceability with national / international standard.

Details of Master Instrument Used for Calibration

Nomenclature	Make / Model	Id. No. / Sr. No.	Calibration Due Date
Tape & scale Measuring M/C	Octagon / MSTC – 1000	NCQC/M – 23 / 027	30-08-2025

NCQC System Certificate No.	Certificate no. & Traceability of master with National Standards
155	↪ Our master Tape & Scale Measuring Machine is in-house calibrated and traceable to National Standard through NABL accredited Laboratory as per Certificate no. NCQC-M/310824/001, Date–31-08-2024.

Traceable To National / International Standards.

Calibrated By	**Maulik Rathod**	**Reviewed & Approved By**	**Jigar Panchal**

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/22 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 1 of 2	
ULR – CC212825000000500F	**Discipline → Mechanical Calibration,** Dimension (Basic-Measuring Instrument, Gauges etc.)	
Details of Observation of Unit Under Calibration	Identification No. : **MT–04** Serial No. : ===== Name of Instrument : **Measuring Tape**	

Range	0 – 30000 mm. (30 Meter)	Make / Model	GK FML/===
Least Count	1 mm	Visual Inspection	OK

Set Point On UUC In mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
100	100.008	0.008
200	200.016	0.016
500	500.029	0.029
1000	1000.037	0.037
2000	2000.051	0.051
3000	3000.059	0.059
4000	4000.067	0.067
5000	5000.075	0.075
6000	6000.089	0.089
7000	7000.097	0.097
8000	8000.104	0.104
9000	9000.115	0.115
10000	10000.129	0.129
11000	11000.134	0.134
12000	12000.145	0.145
13000	13000.167	0.167
14000	14000.179	0.179
15000	15000.191	0.191
16000	16000.203	0.203
17000	17000.226	0.226
18000	18000.237	0.237
19000	19000.248	0.248
20000	20000.268	0.268
21000	21000.279	0.279
22000	22000.258	0.258
23000	23000.314	0.314

Traceable To National / International Standards.

Calibrated By	**Maulik Rathod**	**Reviewed & Approved By**	**Jigar Panchal**

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/22 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 2 of 2	

Details of Observation of Unit Under Calibration

Identification No. : **MT–04**
Serial No. : =====
Name of Instrument : **Measuring Tape**

Set Point On UUC in mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
24000	24000.324	0.324
25000	25000.339	0.339
26000	26000.348	0.348
27000	27000.367	0.367
28000	28000.375	0.375
29000	29000.379	0.379
30000	30000.385	0.385

Maximum Permissible error

Class	Maximum permissible error in mm
Class I	± (0.1 + 0.1 L)
Class II	± (0.3 + 0.2 L)
Class III	± (0.6 + 0.4 L)

Note Where 'L' is the value of the length in meter and rounded up to the nearest integral number of meters.

Remarks:

- Averages of minimum three readings are reported.
- After 1000 mm, the stepwise calibration of each 1000 mm is done with earlier pre-positioning with respect to initial zero.
- Suggested due is given based on customer requirement.
- Calibration points are given based on customer requirement.
- These results are obtained at the time of calibration.
- Any hand written corrections (except @ marked) or photocopies of the report invalidates this certificate.
- Uncertainty of measurement at 95% confidence level is ± 134 x √L µm (L in meter) at coverage factor k = 2.
- Environment condition during calibration: 20 ± 2°C, 40 to 60% Rh.
- Average temperature → 20.8 °C and average humidity 48.5 % Rh during calibration of instruments.
- No external provider was used for calibration and hence it is not applicable.
- Result relates to the item calibrated only.
- Calibration certificate shall not be reproduced except in full without written approval of Director, NCQC.
- Reference standard no.: IS 1269 (Part–1) for woven metallic and glass fibre tape and IS 1269 (Part–2) steel tape measure.
- Condition of instrument found satisfactory during receipt.
- Location of performance of calibration → At Lab.
- Reference calibration method no.: NCQC/CM/M/035.
- Our masters are directly calibrated through NABL accredited calibration laboratory having direct Traceability with national / international standard.

Details of Master Instrument Used for Calibration

Nomenclature	Make / Model	Id. No. / Sr. No.	Calibration Due Date
Tape & scale Measuring M/C	Octagon / MSTC – 1000	NCQC/M – 23 / 027	30-08-2025

NCQC System Certificate No.	Certificate no. & Traceability of master with National Standards
155	↪ Our master Tape & Scale Measuring Machine is in-house calibrated and traceable to National Standard through NABL accredited Laboratory as per Certificate no. NCQC-M/310824/001, Date-31-08-2024.

Traceable To National / International Standards.

Calibrated By	**Maulik Rathod**	**Reviewed & Approved By**	**Jigar Panchal**

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/23 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 1 of 2	
ULR – CC212825000000501F	**Discipline → Mechanical Calibration,** Dimension (Basic-Measuring Instrument, Gauges etc.)	
Details of Observation of Unit Under Calibration	Identification No. : **MT–05** Serial No. : **=====** Name of Instrument : **Measuring Tape**	
Range Least Count	0 – 30000 mm. (30 Meter) 1 mm	Make / Model Visual Inspection GK FML/=== OK

Set Point On UUC in mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
100	99.975	0.025
200	199.962	0.038
500	499.951	0.049
1000	999.936	0.064
2000	1999.925	0.075
3000	2999.911	0.089
4000	3999.894	0.106
5000	4999.875	0.125
6000	5999.863	0.137
7000	6999.851	0.149
8000	7999.839	0.161
9000	8999.825	0.175
10000	9999.811	0.189
11000	10999.797	0.203
12000	11999.787	0.213
13000	12999.771	0.229
14000	13999.759	0.241
15000	14999.732	0.268
16000	15999.725	0.275
17000	16999.714	0.286
18000	17999.703	0.297
19000	18999.688	0.312
20000	19999.676	0.324
21000	20999.655	0.345
22000	21999.614	0.386
23000	22999.606	0.394

Traceable To National / International Standards.

Calibrated By	**Maulik Rathod**	**Reviewed & Approved By**	**Jigar Panchal**

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/23 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 2 of 2	

Details of Observation of Unit Under Calibration

Identification No. : **MT–05**
Serial No. : =====
Name of Instrument : **Measuring Tape**

Set Point On UUC in mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
24000	23999.598	0.402
25000	24999.588	0.412
26000	25999.575	0.425
27000	26999.565	0.435
28000	27999.559	0.441
29000	28999.544	0.456
30000	29999.533	0.467

Maximum Permissible error

Class	Maximum permissible error in mm
Class I	± (0.1 + 0.1 L)
Class II	± (0.3 + 0.2 L)
Class III	± (0.6 + 0.4 L)

Note Where 'L' is the value of the length in meter and rounded up to the nearest integral number of meters.

Remarks:

- Averages of minimum three readings are reported.
- After 1000 mm, the stepwise calibration of each 1000 mm is done with earlier pre-positioning with respect to initial zero.
- Suggested due is given based on customer requirement.
- Calibration points are given based on customer requirement.
- These results are obtained at the time of calibration.
- Any hand written corrections (except @ marked) or photocopies of the report invalidates this certificate.
- Uncertainty of measurement at 95% confidence level is ± 134 x √L µm (L in meter) at coverage factor k = 2.
- Environment condition during calibration: 20 ± 2°C, 40 to 60% Rh.
- Average temperature → 20.5 °C and average humidity 47.3 % Rh during calibration of instruments.
- No external provider was used for calibration and hence it is not applicable.
- Result relates to the item calibrated only.
- Calibration certificate shall not be reproduced except in full without written approval of Director, NCQC.
- Reference standard no.: IS 1269 (Part–1) for woven metallic and glass fibre tape and IS 1269 (Part–2) steel tape measure.
- Condition of instrument found satisfactory during receipt.
- Location of performance of calibration → At Lab.
- Reference calibration method no.: NCQC/CM/M/035.
- Our masters are directly calibrated through NABL accredited calibration laboratory having direct Traceability with national / international standard.

Details of Master Instrument Used for Calibration

Nomenclature	Make / Model	Id. No. / Sr. No.	Calibration Due Date
Tape & scale Measuring M/C	Octagon / MSTC – 1000	NCQC/M – 23 / 027	30-08-2025

NCQC System Certificate No.	Certificate no. & Traceability of master with National Standards
155	↪ Our master Tape & Scale Measuring Machine is in-house calibrated and traceable to National Standard through NABL accredited Laboratory as per Certificate no. NCQC-M/310824/001, Date–31-08-2024.

Traceable To National / International Standards.

Calibrated By	Maulik Rathod	Reviewed & Approved By	Jigar Panchal

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/24 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 1 of 2	
ULR – CC212825000000502F	**Discipline → Mechanical Calibration,** Dimension (Basic-Measuring Instrument, Gauges etc.)	
Details of Observation of Unit Under Calibration	Identification No. : **MT–06** Serial No. : **=====** Name of Instrument : **Measuring Tape**	
Range Least Count	0 – 30000 mm. (30 Meter) 1 mm	Make / Model Visual Inspection GK FML/=== OK

Set Point On UUC In mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
100	100.025	0.025
200	200.034	0.034
500	500.048	0.048
1000	1000.059	0.059
2000	2000.067	0.067
3000	3000.062	0.062
4000	4000.079	0.079
5000	5000.091	0.091
6000	6000.105	0.105
7000	7000.113	0.113
8000	8000.126	0.126
9000	9000.137	0.137
10000	10000.149	0.149
11000	11000.167	0.167
12000	12000.175	0.175
13000	13000.185	0.185
14000	14000.203	0.203
15000	15000.216	0.216
16000	16000.223	0.223
17000	17000.238	0.238
18000	18000.249	0.249
19000	19000.264	0.264
20000	20000.278	0.278
21000	21000.296	0.296
22000	22000.314	0.314
23000	23000.325	0.325

Traceable To National / International Standards.

Calibrated By	Maulik Rathod	Reviewed & Approved By	Jigar Panchal

NCQC LABORATORY LLP

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Visit our Web Site : www.calibrationlaboratory.in • LLP IN : ACH-9094 / GSTIN : 24AAWFN8511B1Z9

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/24 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 2 of 2	

Details of Observation of Unit Under Calibration

Identification No. : **MT–06**
Serial No. : **=====**
Name of Instrument : **Measuring Tape**

Set Point On UUC in mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
24000	24000.325	0.325
25000	25000.336	0.336
26000	26000.341	0.341
27000	27000.359	0.359
28000	28000.367	0.367
29000	29000.385	0.385
30000	30000.391	0.391

Maximum Permissible error

Class	Maximum permissible error in mm
Class I	± (0.1 + 0.1 L)
Class II	± (0.3 + 0.2 L)
Class III	± (0.6 + 0.4 L)

Note Where 'L' is the value of the length in meter and rounded up to the nearest integral number of meters.

Remarks:

- Averages of minimum three readings are reported.
- After 1000 mm, the stepwise calibration of each 1000 mm is done with earlier pre-positioning with respect to initial zero.
- Suggested due is given based on customer requirement.
- Calibration points are given based on customer requirement.
- These results are obtained at the time of calibration.
- Any hand written corrections (except @ marked) or photocopies of the report invalidates this certificate.
- Uncertainty of measurement at 95% confidence level is ± 134 x √L µm (L in meter) at coverage factor k = 2.
- Environment condition during calibration: 20 ± 2°C, 40 to 60% Rh.
- Average temperature → 20.8 °C and average humidity 49.5 % Rh during calibration of instruments.
- No external provider was used for calibration and hence it is not applicable.
- Result relates to the item calibrated only.
- Calibration certificate shall not be reproduced except in full without written approval of Director, NCQC.
- Reference standard no.: IS 1269 (Part–1) for woven metallic and glass fibre tape and IS 1269 (Part–2) steel tape measure.
- Condition of instrument found satisfactory during receipt.
- Location of performance of calibration → At Lab.
- Reference calibration method no.: NCQC/CM/M/035.
- Our masters are directly calibrated through NABL accredited calibration laboratory having direct Traceability with national / international standard.

Details of Master Instrument Used for Calibration

Nomenclature	Make / Model	Id. No. / Sr. No.	Calibration Due Date
Tape & scale Measuring M/C	Octagon / MSTC –1000	NCQC/M – 23 / 027	30-08-2025

NCQC System Certificate No.	Certificate no. & Traceability of master with National Standards
155	↪ Our master Tape & Scale Measuring Machine is in-house calibrated and traceable to National Standard through NABL accredited Laboratory as per Certificate no. NCQC-M/310824/001, Date-31-08-2024.

Traceable To National / International Standards.

Calibrated By	Maulik Rathod	Reviewed & Approved By	Jigar Panchal

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/25 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 1 of 3	
ULR – CC212825000000503F	**Discipline → Mechanical Calibration,** Dimension (Basic-Measuring Instrument, Gauges etc.)	
Details of Observation of Unit Under Calibration	Identification No. : **MT–50** Serial No. : ===== Name of Instrument : **Measuring Tape**	
Range Least Count	0 – 50000 mm. (50 Meter) 1 mm	Make / Model Visual Inspection Freemans/=== OK

Set Point On UUC In mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
100	100.012	0.012
200	200.025	0.025
500	500.029	0.029
1000	1000.032	0.032
2000	2000.045	0.045
3000	3000.051	0.051
4000	4000.056	0.056
5000	5000.043	0.043
6000	6000.059	0.059
7000	7000.076	0.076
8000	8000.085	0.085
9000	9000.098	0.098
10000	10000.105	0.105
11000	11000.116	0.116
12000	12000.126	0.126
13000	13000.135	0.135
14000	14000.146	0.146
15000	15000.171	0.171
16000	16000.198	0.198
17000	17000.213	0.213
18000	18000.235	0.235
19000	19000.247	0.247
20000	20000.267	0.267
21000	21000.289	0.289
22000	22000.301	0.301
23000	23000.324	0.324

Traceable To National / International Standards.

Calibrated By	**Maulik Rathod**	**Reviewed & Approved By**	**Jigar Panchal**

NCQC LABORATORY LLP

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/25 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 2 of 3	

Details of Observation of Unit Under Calibration

Identification No. : **MT–50**
Serial No. : =====
Name of Instrument : **Measuring Tape**

Set Point On UUC in mm	Division measured by Tape & Scale Measuring Machine in mm	Absolute Error in mm
24000	24000.329	0.329
25000	25000.331	0.331
26000	26000.345	0.345
27000	27000.348	0.348
28000	28000.356	0.356
29000	29000.369	0.369
30000	30000.374	0.374
31000	31000.385	0.385
32000	32000.401	0.401
33000	33000.412	0.412
34000	34000.416	0.416
35000	35000.423	0.423
36000	36000.438	0.438
37000	37000.447	0.447
38000	38000.469	0.469
39000	39000.471	0.471
40000	40000.462	0.462
41000	41000.489	0.489
42000	42000.493	0.493
43000	43000.513	0.513
44000	44000.524	0.524
45000	45000.534	0.534
46000	46000.541	0.541
47000	47000.559	0.559
48000	48000.572	0.572
49000	49000.583	0.583
50000	50000.597	0.597

Traceable To National / International Standards.

Calibrated By	Maulik Rathod	Reviewed & Approved By	Jigar Panchal

NCQC LABORATORY LLP

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Calibration Certificate

Name of Customer → **CWM Engineering Work Shop** Sabarmati, Ahmedabad-19	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/100225/25 11-02-2025 10-02-2025 09-02-2026
Date Of Receipt / Ref. No.→ 07-02-2025	F/CR/M/035/01/1, Issue No.02 Page 3 of 3	

Details of Observation of Unit Under Calibration	Identification No.	:	**MT–50**
	Serial No.	:	=====
	Name of Instrument	:	**Measuring Tape**

Maximum Permissible error

Class	Maximum permissible error in mm
Class I	± (0.1 + 0.1 L)
Class II	± (0.3 + 0.2 L)
Class III	± (0.6 + 0.4 L)

Note Where 'L' is the value of the length in meter and rounded up to the nearest integral number of meters.

Remarks:

- Averages of minimum three readings are reported.
- After 1000 mm, the stepwise calibration of each 1000 mm is done with earlier pre-positioning with respect to initial zero.
- Suggested due is given based on customer requirement.
- Calibration points are given based on customer requirement.
- These results are obtained at the time of calibration.
- Any hand written corrections (except @ marked) or photocopies of the report invalidates this certificate.
- Uncertainty of measurement at 95% confidence level is ± 134 x √L µm (L in meter) at coverage factor k = 2.
- Environment condition during calibration: 20 ± 2°C, 40 to 60% Rh.
- Average temperature → 21.0 °C and average humidity 49.3 % Rh during calibration of instruments.
- No external provider was used for calibration and hence it is not applicable.
- Result relates to the item calibrated only.
- Calibration certificate shall not be reproduced except in full without written approval of Director, NCQC.
- Reference standard no.: IS 1269 (Part–1) for woven metallic and glass fibre tape and IS 1269 (Part–2) steel tape measure.
- Condition of instrument found satisfactory during receipt.
- Location of performance of calibration → At Lab.
- Reference calibration method no.: NCQC/CM/M/035.
- Our masters are directly calibrated through NABL accredited calibration laboratory having direct Traceability with national / international standard.

Details of Master Instrument Used for Calibration

Nomenclature	Make / Model	Id. No. / Sr. No.	Calibration Due Date
Tape & scale Measuring M/C	Octagon / MSTC – 1000	NCQC/M – 23 / 027	30-08-2025

NCQC System Certificate No.	Certificate no. & Traceability of master with National Standards
155	➥ Our master Tape & Scale Measuring Machine is in-house calibrated and traceable to National Standard through NABL accredited Laboratory as per Certificate no. NCQC-M/310824/001, Date–31-08-2024.

Traceable To National / International Standards.

Calibrated By	Maulik Rathod	Reviewed & Approved By	Jigar Panchal

NATIONAL CENTRE FOR QUALITY CALIBRATION

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Calibration Certificate

Name of Customer → **Chief Workshop Manager** Engineering Workshop,Kaligam, Ahmedabad	Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/040723/12 04-07-2023 04-07-2023 03-07-2024
Date Of Receipt / Ref. No.→ 03-07-2023	F/CR/M/052/1, Issue No.02 Page 1 of 2	
ULR – CC212823000005207F	**Discipline → Mechanical Calibration,** Force, Torque	
Details of Observation of Unit Under Calibration	Identification No. : **23H – 05** Serial No. : **23H – 05** Name of Instrument : **Torque Wrench**	

Range	135 – 675 Nm	Visual Inspection	OK
Least Count	15 Nm	Make/ Model	Mac Master/ TW–500R
Type	Type II	Class	A

Force Set on Torque Wrench in Nm	Reading Observed By Torque Wrench calibration system in Nm	Absolute Error In Nm	Expanded Uncertainty (±)
135	138.8	3.8	1.5 % rdg.
405	409.5	4.5	1.5 % rdg.
675	690.1	15.1	2.79 % rdg.

Remarks:

- Averages of minimum five readings are reported.
- Suggested due date is given based on customer requirements.
- These results are obtained at the time of calibration.
- Location of Performance of Calibration → At Lab.
- Any hand written corrections (except @ marked) or photocopies of the report invalidates this certificate.
- The uncertainties are for a confidence probability of not less than 95% with coverage factor k = 2.
- Environment condition during calibration: 23 ± 2°C, 40 to 60% Rh.
- Average temperature → 23.6 °C and average humidity 48 % Rh during calibration of instruments.
- No external provider was used for calibration and hence it is not applicable.
- Result relates to the item calibrated only.
- Calibration certificate shall not be reproduced except in full without written approval of Director, NCQC.
- Reference standard no.: IS/ISO 6789.
- Condition of instrument found satisfactory during receipt.
- Reference calibration method no.: NCQC/CM/M/052.
- Our masters are directly calibrated through NABL accredited calibration laboratory having direct Traceability with national / international standard.

Traceable To National / International Standards.

Calibrated By	Jaydeep Khatri	Reviewed & Approved By	Jigar Panchal

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DIMENSION REGISTER

Four Point certificate

Name of Work: Fabrication and supply of 4X12.2m-WPG for Br.No. 954 of ADI-Division. Offering of Span No. 1st to 4th

Ref. ↳ W.O.NO.— 67971372

It is certified that,

(i) Steel used for welded Bridge Girders components is of weldable quality is IS: 2062 Gr. BO fully killed and normalized, which has been inspected & approved by the Railways.

(ii) Fabrication has been done with the help of CNC machines.

(iii) Entire welding was done by approved welders using approved welding procedures (WPSS) and welding consumables.

(iv) Fabrication work has been inspected by our internal quality control/ inspection organization including the welding. All defect defects have been rectified and final dimension are within tolerances.

Sectional Authority

(JAG officer in charge of the project)

24/04/25

ACMT

STAGE - I Inspection call (as per BS 130)

Name of Work: Fabrication and supply of 4X12.2m WPG for Br. No. 954 of ADI-Division. Offering of Span No. 1st to 4th

Ref: W.O.No.– 67971372

(Ref codes: - IRS Welded Bridge Code, IRS: B1 - 2001, RDSO Report No. BS: 110, RDSO Report No. BS: 111, IS: 1852, BS130)

	Inspection of Layout/Master plates & WPQR	Offering status from agency (Yes/No)	Remarks, if any
	Welder approval i.e. WPQR		
1	Readiness of sample pieces for welding in presence of inspecting authority	Yes	
	WPQR documents availability	Yes	
2	Machines as per New STR M&P	Yes	
3	Offering of layout/master plates for approval	Yes	
4	Material offered are placed properly for inspection	Yes	

It is certified that:

- Work is done as per approval QAP.
- Internal inspection is done by QC Lab & SSE/STR as per approval QAP and no significant defect is left over.

QC Lab

SSE/Fab

17/1/25

SSE/STR

24/01/25

ACMT/EDMS

Sectional Authority

(JAG officer in charge of the project)

STAGE-II Inspection Call (as per BS 130)

Name of Work: Fabrication and Supply of 4X12.2M-wpcr for Br. No. 954 of ADI-Division. Offering of Span NO. 1st to 4th

W.O.No.: 67971372

Ref codes: IRS Welded Bridge Code, IRS: B1-2001, RDSO Report No. BS:110, RDSO Report No. BS:111, IS:1852, BS:130)

	Inspection of Layout / Master Plates &.WPQR	Offering Status from the agency (YES/NO)	Remarks, if any
1	Documents to be submitted		
	Fabricator Record	Yes	
	Welding Procedure Data Register	Yes	
	Weld Inspection Report (DPT & Etching)	Yes	
2	Before offering the girder for trial assembly inspection all finishing operations such as final run of GMAW, holes for bearing, removal of tack weld, surface finish, draglines, spatter, drill burr, finishing of notch mark etc. to be ensured by the fabricator.	Yes	
3	Readiness for measurements of camber (Girders must be supported at endpoints only for camber measurement.)	Yes	
4	Inspection of Stud Welding	—	
	Ring Test & Bent Test	—	
5	The materials offered are placed properly for inspection.	Yes	
Note: During fabrication, it is to be ensured that work is as per approval QAP, only approved welders carry out welding as per approved WPSS, work is as per dimensional tolerance and quality aspects and should satisfy itself before sending inspection cell to FIU/EW/SBI for trail assembly.			

It is certified that:

Work is done as per approval QAP.

Internal Inspection is done by QC Lab & SSE/STR as per Approval QAP and no significant is left over.

QC LAB cms/qa

SSE/Fab.

17/1/25
SSE/STR

24/01/25
ACMT/EW5

Sectional Authority
(JAG officer in charge of the project)

Certificate of internal inspection

Name of work: Fabrication and supply of 4X12.2~~m~~ WPG for Br. No. 954 of ADI-Divisian. offering of Span No. 1st to 4th

Ref. W.O.NO.— 67971372

*****

This is to certify that, we have inspected all components of above subject work for weld and dimension. Weld and dimension are found as per approved drawing, QAP & WPSS.

QC Lab CMS/QCL

SSE/Fab.

SSE/STR 17/1/25

Sanj — 24/01/25

ACMT/EWS

DIMENSIONAL INSPECTION OF TRIAL ASSEMBLED 12.2M WELDED PLATE GIRDER

Name of Work: 04x12.2m WPG, Regirdering of Br.No. 954 for ADI-PLR Section, ADI Division, WR.

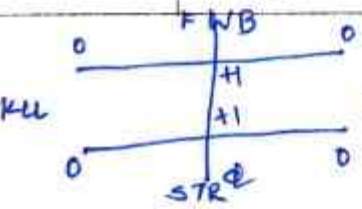
Drawing No: RDSO/B-16014/R2 to RDSO B/16014/SR2

Work Order No: 67971372 **Span No:** 1 St **Date:** 06-01-2025

DETAILS OF SECTIONS		
Description	**Standard Dimesions (mm)**	**Observed Dimensions (mm)**
I-SECTION		
Web Plate	16 x 1180 x 9450/3850	16 x 1180 x 9451 /3851
Top Flange Plate	28 x 500 x 9450/3850	28 x 500 x 9451 /3851
Bottom Flange Plate	40 x 500 x 9450/3850	40 x 500 x 9451 /3851
End Stiffener	28 x 180 x 1180	28 x 181 x 1180
Intermidate Stiffener Without X-Frame	10 x 90 x 1033	10 x 90 x 1032
Intermidate Stiffener With X-Frame	10 x 90 x 1180	10 x 90 x 1180
Top Lateral Bracing	ISA 100 x 100 x 12 x 2188	L 100 x 100 x 12 x 2189
END DIAPHAGRAM (2 nos)		
Web Plate	12 x 906 x 1804	12 x 906 x 1804
Top Flange Plate	12 x 200 x 1804	12 x 200 x 1804
Bottom Flange Plate	12 x 200 x 1804	12 x 201 x 1804
Bearing Stiffner	12 x 90 x 906	12 x 91 x 906
Pad Plate	12 x 200 x 185	12 x 202 x 187
X-FRAME (2 nos)		
Horizontal Angle	ISA 75 x 75 x 10 x 1794	L 75 x 75 x 10 x 1794
Diagonal Angle	ISA 75 x 75 x 10 x 1735	L 75 x 75 x 10 x 1736
Top Corner Gusset	12 x 237 x 280	12 (as per profile)
Bottom Corner Gusset	12 x 237 x 280	12 (as per profile)
Center Gusset	12 x 196 x 108	12 (as per profile)
SPLICES (2 Joint)		
Web Cover Plate	12 x 270 x 1070	12 x 271 x 1070
Top Inner Cover Plate	16 x 220 x 600	16 x 220 x 601
Top Outer Cover Plate	16 x 500 x 600	16 x 501 x 600
Bottom Inner Cover Plate	40 x 220 x 710	40 x 221 x 711
Bottom Outer Cover Plate	40 x 500 x 710	40 x 500 x 710
ELASTOMATRIC BEARINGS (4 Nos)		
Top Plate	50 x 300 x 630	50 x 300 x 631
Bottom Plate	50 x 300 x 895	50 x 301 x 896
Channel	ISMC 150 x 90	ISMC 150 x 90
MS Plate	5 x 142 x 152	5 x 142 x 151

DETAILS OF TRIAL ASSEMBLY					
Description	**Standard Dimesions (mm)**	**Tolerances**		**Observed Dimensions (mm)**	
		Plus	**Minus**	**Girder 1**	**Girder 2**
Overall Length (9450+3850)	13300	6	3	13303	13304
Bearing Center	13100	1	1	13099	13101
Center to Center (at ends)	1850	1	1	1849	1849
Height (at ends)	1248	3	1	1248	1247
Diagonal (at ends)	2232	3	3	2231	2230
Diagonal (at Top)	13428	3	3	13429	13430
Bearing Hole Diameter	28	-	-	28	28
Camber	-	-	-	-	-

* Levels :



06/01/25 JE/IIU — SSE/STR 16/1/25

FBW

DIMENSIONAL INSPECTION OF TRIAL ASSEMBLED 12.2M WELDED PLATE GIRDER

Name of Work: 04x12.2m WPG, Regirdering of Br.No. 954 for ADI-PLR Section, ADI Division, WR.

Drawing No: RDSO/B-16014/R2 to RDSO B/16014/5R2

Work Order No: 67971372 **Span No:** 2nd **Date:** 16-01-2025

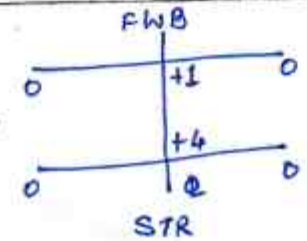
DETAILS OF SECTIONS

Description	Standard Dimesions (mm)	Observed Dimensions (mm)
I-SECTION		
Web Plate	16 x 1180 x 9450/3850	16 X 1180 X 9451/3851
Top Flange Plate	28 x 500 x 9450/3850	28 X 501 X 9451/3851
Bottom Flange Plate	40 x 500 x 9450/3850	40 X 502 X 9451/3851
End Stiffener	28 x 180 x 1180	28 X 180 X 1180
Intermidate Stiffener Without X-Frame	10 x 90 x 1033	10 X 89 X 1034
Intermidate Stiffener With X-Frame	10 x 90 x 1180	10 X 91 X 1180
Top Lateral Bracing	ISA 100 x 100 x 12 x 2188	L 100 X 100 X 12 X 2189
END DIAPHAGRAM (2 nos)		
Web Plate	12 x 906 x 1804	12 X 906 X 1805
Top Flange Plate	12 x 200 x 1804	12 X 200 X 1805
Bottom Flange Plate	12 x 200 x 1804	12 X 201 X 1805
Bearing Stiffner	12 x 90 x 906	12 X 90 X 906
Pad Plate	12 x 200 x 185	12 X 201 X 188
X-FRAME (2 nos)		
Horizontal Angle	ISA 75 x 75 x 10 x 1794	L 75 X 75 X 10 X 1794
Diagonal Angle	ISA 75 x 75 x 10 x 1735	L 75 X 75 X 10 X 1736
Top Corner Gusset	12 x 237 x 280	12 (as per profile)
Bottom Corner Gusset	12 x 237 x 280	12 (as per profile)
Center Gusset	12 x 196 x 108	12 (as per profile)
SPLICES (2 Joint)		
Web Cover Plate	12 x 270 x 1070	12 X 271 X 1071
Top Inner Cover Plate	16 x 220 x 600	16 X 222 X 601
Top Outer Cover Plate	16 x 500 x 600	16 X 502 X 600
Bottom Inner Cover Plate	40 x 220 x 710	40 X 221 X 710
Bottom Outer Cover Plate	40 x 500 x 710	40 X 500 X 710
ELASTOMATRIC BEARINGS (4 Nos)		
Top Plate	50 x 300 x 630	-
Bottom Plate	50 x 300 x 895	-
Channel	ISMC 150 x 90	-
MS Plate	5 x 142 x 152	-

DETAILS OF TRIAL ASSEMBLY

Description	Standard Dimesions (mm)	Tolerances		Observed Dimensions (mm)	
		Plus	Minus	Girder 1	Girder 2
Overall Length (9450+3850)	13300	6	3	13302	13303
Bearing Center	13100	1	1	13100	13101
Center to Center (at ends)	1850	1	1	1849	1850
Height (at ends)	1248	3	1	1247	1249
Diagonal (at ends)	2232	3	3	2231	2231
Diagonal (at Top)	13428	3	3	13431	13431
Bearing Hole Diameter	28	-	-	28	28
Camber	-	-	-	-	-

* Levels



16-01-25 JE/IIU

16/1/25 SSE/STR

DIMENSIONAL INSPECTION OF TRIAL ASSEMBLED 12.2M WELDED PLATE GIRDER

Name of Work: 04x12.2m WPG, Regirdering of Br.No. 954 for ADI-PLR Section, ADI Division, WR.

Drawing No: RDSO/B-16014/R2 to RDSO B/16014/5R2

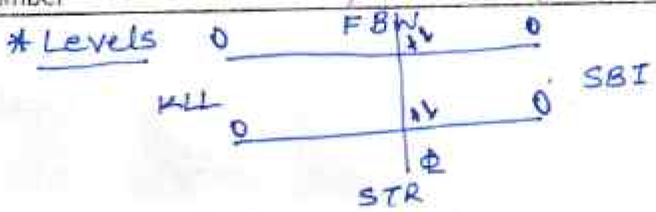
Work Order No: 67971372 **Span No:** 3rd **Date:** 22-01-2025

DETAILS OF SECTIONS

Description	Standard Dimesions (mm)	Observed Dimensions (mm)
I-SECTION		
Web Plate	16 x 1180 x 9450/3850	16 x 1180 x 9451 / 3850
Top Flange Plate	28 x 500 x 9450/3850	28 x 501 x 9451 / 3850
Bottom Flange Plate	40 x 500 x 9450/3850	40 x 500 x 9451 / 3850
End Stiffener	28 x 180 x 1180	28 x 182 x 1180
Intermidate Stiffener Without X-Frame	10 x 90 x 1033	10 x 91 x 1032
Intermidate Stiffener With X-Frame	10 x 90 x 1180	10 x 91 x 1180
Top Lateral Bracing	ISA 100 x 100 x 12 x 2188	∠ 100 x 100 x 12 x 2187
END DIAPHAGRAM (2 nos)		
Web Plate	12 x 906 x 1804	12 x 906 x 1805
Top Flange Plate	12 x 200 x 1804	12 x 202 x 1805
Bottom Flange Plate	12 x 200 x 1804	12 x 201 x 1804
Bearing Stiffner	12 x 90 x 906	12 x 92 x 906
Pad Plate	12 x 200 x 185	12 x 200 x 187
X-FRAME (2 nos)		
Horizontal Angle	ISA 75 x 75 x 10 x 1794	∠ 75 x 75 x 10 x 1793
Diagonal Angle	ISA 75 x 75 x 10 x 1735	∠ 75 x 75 x 10 x 1736
Top Corner Gusset	12 x 237 x 280	12 (as per profile)
Bottom Corner Gusset	12 x 237 x 280	12 (as per profile)
Center Gusset	12 x 196 x 108	12 (as per profile)
SPLICES (2 Joint)		
Web Cover Plate	12 x 270 x 1070	12 x 272 x 1071
Top Inner Cover Plate	16 x 220 x 600	16 x 221 x 602
Top Outer Cover Plate	16 x 500 x 600	16 x 500 x 601
Bottom Inner Cover Plate	40 x 220 x 710	40 x 220 x 711
Bottom Outer Cover Plate	40 x 500 x 710	40 x 501 x 710
ELASTOMATRIC BEARINGS (4 Nos)		
a	50 x 300 x 630	–
Bottom Plate	50 x 300 x 895	–
Channel	ISMC 150 x 90	–
MS Plate	5 x 142 x 152	–

DETAILS OF TRIAL ASSEMBLY

Description	Standard Dimesions (mm)	Tolerances		Observed Dimensions (mm)	
		Plus	Minus	Girder 1	Girder 2
Overall Length (9450+3850)	13300	6	3	13300	13304
Bearing Center	13100	1	1	13100	13099
Center to Center (at ends)	1850	1	1	1850	1849
Height (at ends)	1248	3	1	1247	1247
Diagonal (at ends)	2232	3	3	2233	2234
Diagonal (at Top)	13428	3	3	13429	13430
Bearing Hole Diameter	28	-	-	28	28
Camber	-	-	-		



2201 JE/110

22/01/25 - SSE/STR

DIMENSIONAL INSPECTION OF TRIAL ASSEMBLED 12.2M WELDED PLATE GIRDER

Name of Work: 04x12.2m WPG, Regirdering of Br.No. 954 for ADI-PLR Section, ADI Division, WR.

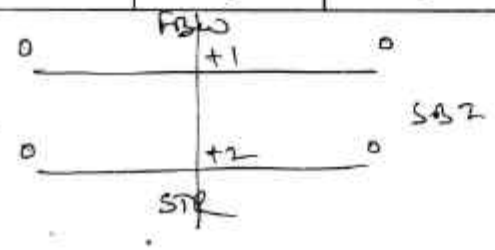
Drawing No: RDSO/B-16014/R2 to RDSO B/16014/5R2

Work Order No: 67971372 **Span No:** 4th **Date:** 15/02/2025

DETAILS OF SECTIONS		
Description	**Standard Dimesions (mm)**	**Observed Dimensions (mm)**
I-SECTION		
Web Plate	16 x 1180 x 9450/3850	16 X 1180
Top Flange Plate	28 x 500 x 9450/3850	28 X 501
Bottom Flange Plate	40 x 500 x 9450/3850	40 X 501
End Stiffener	28 x 180 x 1180	28 X 187 X 1180
Intermidate Stiffener Without X-Frame	10 x 90 x 1033	10 X 90 X 1033
Intermidate Stiffener With X-Frame	10 x 90 x 1180	10 X 91 X 1180
Top Lateral Bracing	ISA 100 x 100 x 12 x 2188	L 100 X 100 X 12 .
END DIAPHAGRAM (2 nos)		
Web Plate	12 x 906 x 1804	12 X 906 X 1804
Top Flange Plate	12 x 200 x 1804	12 X 200 X 1804
Bottom Flange Plate	12 x 200 x 1804	12 X 201 X 1804
Bearing Stiffner	12 x 90 x 906	12 X 90 X 906
Pad Plate	12 x 200 x 185	12 X 200 X 185
X-FRAME (2 nos)		
Horizontal Angle	ISA 75 x 75 x 10 x 1794	L 75 X 75 X 10 - 1794
Diagonal Angle	ISA 75 x 75 x 10 x 1735	L 75 X 75 X 10 - 1735
Top Corner Gusset	12 x 237 x 280	12 X 237 X 280
Bottom Corner Gusset	12 x 237 x 280	12 X 237 X 280
Center Gusset	12 x 196 x 108	12 X 196 X 108
SPLICES (2 Joint)		
Web Cover Plate	12 x 270 x 1070	12 X 270 X 1070
Top Inner Cover Plate	16 x 220 x 600	16 X 220 X 601
Top Outer Cover Plate	16 x 500 x 600	16 X 501 X 600
Bottom Inner Cover Plate	40 x 220 x 710	40 X 220 X 710
Bottom Outer Cover Plate	40 x 500 x 710	40 X 501 X 710
ELASTOMATRIC BEARINGS (4 Nos)		
Top Plate	50 x 300 x 630	—
Bottom Plate	50 x 300 x 895	—
Channel	ISMC 150 x 90	—
MS Plate	5 x 142 x 152	—

DETAILS OF TRIAL ASSEMBLY					
Description	**Standard Dimesions (mm)**	**Tolerances**		**Observed Dimensions (mm)**	
		Plus	**Minus**	**Girder 1**	**Girder 2**
Overall Length (9450+3850)	13300	6	3	13300	13302
Bearing Center	13100	1	1	13100	13101
Center to Center (at ends)	1850	1	1	1850	1849
Height (at ends)	1248	3	1	1248 / 1247	1248 / 1248
Diagonal (at ends)	2232	3	3	2232 / 33	2234 / 32
Diagonal (at Top)	13428	3	3	13429	13428
Bearing Hole Diameter	28	-	-	28	28
Camber	-	-	-	—	—

* Level :



4X12.2m WPG

W.O.NO. · 67971372

Description & Date	Span	No.	Ticket No. fitter	g welder	Size of plate	Heat No.
WEB plate (A) 25/10/24	01	02	1071	1030	16x2500x10000mm	379518 3176730.2
29/10/24 WIP (A)	02	01	1071	1048	11	379518 3176729.1
WIP (B)	01	02				379518 3176739.2
T/P FIP (A) 05/11/24	01	02	1071	1708	28+2000x10000	306332
	02	01				
TIP FIP (A) 07/11/2024	02	01	1071	1708	28x2000x 10000	306332
	03	02				
BTM FIP (A) 07/11/2024	01	02	1071	1708	40x2500x12000mm	Q25264
BTM FIP (A) 07/11/2024	02	02	1071	1048	11	Q25264
WIP. (A) 12/11/2024	02	01	1071	1048	16x2500x10000mm	379518 (3176729.1)
WIP (A) 13/11/2024	03	02	1071	1030	11	380056 (3181341.1)
BTM FIP (A) 14/11/2024	03	02	1071	1030	40x2500x12000 mm	Q25264
BTM FIP (A) 16/11	04	02	1071	1048	11	Q526262
TIP FIP (A) 16/11	04	02	1071	1030	28x2000x 10000	306332
TIP FIP (B) 16/11	01	02	1071	1030	11	306332

Supplier	Grade	MTC No.	Th.	Width	Length	Sign. of Sup.
BSP	BO	RCL/MTL/PLM/62006044 dt-29/04/2024	16	1188	9650	
			16	1181	9650	25/10/24
BSP	BO	RCL/MTL/PLM/62006045 dt-29/04/2024	16	1181	9650	
B.SP	BO	RCL/MTL/PLM/62006045 dt-29/04/2024	16	1181	8000	29/10/24
B.S.P	BO	RCL/MTL/PLM 80605797 20/07/2020	28	500	9700	
			28	501	9700	05/11/24
			28	500	9700	
BSP	BO	RCL/MTL/PLM/80605820 21/07/2020	28	500	9701	
			28	500	9700	07/11/24
AM/NS	BO	PL/D/2062/10/2024/030092 18/06/2024	40	500	9700	
			40	500	9700	07/11/24
AM/NS	BO	PL/D/2062/10/2024/030092 18/06/2024	40	501	9701	
			40	500.5	9701	07/11/24
B.S.P	BO	RCL/MTL/PLM 62006045 dt-29/04/2024	16	1181	9650	
BSP	BO	RCL/MTL/PLM/80812306 dt-01/05/2024	16	1180	9657	12/11/24
			16	1181	9650	13/11/24
AM/NS	BO	PL/D/2062/10/2024/030092 18/06/2024	40	500	9700	
			40	500	9700	14/11/24
AM/NS	BO	—do—	40	500	9700	16/11/24
			40	500	9700	
B.S.P	BO	RCL/MTL/PLM/80605820 21/07/2020	28	500	9700	
			28	500	9700	16/11/24
B.S.P	BO	RCL/MTL/PLM/80605820 21/07/2020	28	501	8000	16/11/24

4X12.2m WPS

W.O.NO.- 6A991372

Description & Date	Span	No.s	Ticket No. of fitter	Ticket No. of welder	Size of plate	Heat No.
18/11/2024 T/P/F/P (B)	02	02	1071	1704	28X2000 x 10000	306322
	03	02				
	04	02				
18/11/2024 B/T/M/F/P (B)	02	02	1071	1708	40X2500x12000 mm	2406663
	02	02				2406663
	03	02	1071	1708	"	2406652
	04	02				2406652
20/11/2024 W/P (A)	04	02	1106	1048	16X2500X10000 mm	379517 3176721.1
W/P (B) 20/11/24	02	02	1106	1048	"	380056
	03	02				3181340.1
W/P (B) 21/11/24	04	02	1071	1030	"	379518 3176739.2

Supplier	Grade	MTC No.		Th.	width	Length	Sign. of Sup.
BSP	BO	RCL/MTC/PLM/80605820	21/04/2024	28	500	8000	
				28	500	8001	18/11/24
				28	500	8001	
R.S.P	BO	724092	19/04/2024	40	500	8000	
R.S.P	BO	724092	19/04/2024	40	501	8000	18/11/24
R.S.P	BO	724082	19/04/2024	40	500	8000	
R.S.P	BO	724082	19/04/2024	40	500	8000	
B.S.P	BO	RCL/MTC/PLM/62006045	29/04/2024	16	1180	9650	
				16	1181	9652	20/11/24
B.S.P	BO	RCL/MTC/PLM/80813580	13/01/2024	16	1181	8000	
				16	1181	8000	20/11/24
B.S.P	BO	RCL/MTC/PLM/62006045	29/04/2024	16	1181	8000	21/11/24

W.O.NO - 67971372

4×12.2 m WPG

(17)

Description	Size	MTC NO.	Grade	Supplier	Heat NO.	Sign. of Sup.
Span-1						
Diaph. web	1804×906×12mm = 02	700658 12.01.2024	BO	R.S.P	2322464	07/11
Diaph. HP	1804×200×12mm = 04	700658 20.01.2024	BO	R.S.P	2322583	
Bed plate	895×300×50mm = 04	398925 28/11/2019	BO	R.S.P	1917710	
Bearing plate	630×300×50mm = 04	398925 28/11/2019	BO	R.S.P	1917710	
Lateral angle	L100×100×12mm×2188=09	01600111142 16.04.2024	BR	GEETA ENTERPRISE SAIL	24100226	14/11
X.Frame	L75×75×10mm×1794 = 04	SAIL/CMO/C4483 TC-1000042 10.10.2023	BO	SAIL	DC00708 8900005083S1	
	L75×75×10mm×1795 = 04	—do—	BO	SAIL		
Span-2						
Diaph web	1804×906×12mm = 02	700658 12.01.2024	BO	R.S.P	2322583	
Diaph. HP	1804×200×12mm = 04	700658 12.01.2024	BO	R.S.P	2324464	16/11
Bed pt	895×300×50mm = 04	398925 28/11/2019	BO	R.S.P	1917710	
Bearing pt	630×300×50mm = 04	398925 28/11/2019	BO	R.S.P	1917710	
Lateral Angle	L100×100×12×2188mm = 09	01600111142 16.04.2024	BR	GEETA ENTERPRISE SAIL	24100226	
X-frame	L75×75×10×1794mm = 04	SAIL/CMO/C4483/TC-1000042 10.10.2023	BO	SAIL	DC00708 8900005083S1	
	L75×75×10×1795mm = 04	—do—	BO	SAIL		
Span-3&4						
Diaph. web	1804×906×12mm = 02+02	700658 12.01.2024	BO	R.S.P	2322583	
Diaph. HP	1804×200×12mm = 04+04	700658 12.01.2024	BO	R.S.P	2322589	
Bed pt	895×300×50mm = 04+04	398925 28/11/2019	BO	R.S.P	1917710	20/11
Bearing pt	630×300×50mm = 04+04	398925 28/11/2019	BO	R.S.P	1917710	
Lateral Angle	L100×100×12×2188mm = 09+09	01600111142 16.04.2024	BR	GEETA ENTERPRISE SAIL	24100226	
X.frame	L75×75×10×1794mm = 04+04	SAIL/CMO/C4483/TC-1000042 10.10.2023	BO	SAIL	DC00708 8900005083S1	
	L75×75×10×1795mm = 04+04	—do—	BO	SAIL		

12.2M welded Plate girder: W.O.No → 67971372

Drg no → RDSO-B-1/16014

Date / /20

Page No.:

Span-1:

Date	Flap	Detail of Material dimensions:	Remarks	Checked by welding Section:
20.11.2024	Web 1A Flange Top 1A Bottom 1A	Size 9700 x 1180 x 16mm 9700 x 520 x 28 mm 9700 x 520 x 40 mm	Flap-A	OK SSE
21.11.2024	Web 1B Flange Top 1B Bottom 1B	Size 4000 x 1180 x 16 mm 4000 x 520 x 28 mm 4000 x 520 x 40 mm	Flap-B	OK SSE
25.11.2024	Web 1C Flange: Top 1C Bottom 1C	Size 9700 x 1180 x 16 mm 9700 x 520 x 28 mm 9700 x 520 x 40 mm	Flap C	OK SSE
27.11.2024	Web 1D Flange 1D Bottom 1D	Size: 4000 x 1180 x 16 mm 4000 x 520 x 28 mm 4000 x 520 x 40 mm	Flap-D	OK SSE/FVR

12-2 m welded plate girder W.O.No - 87971372:

Drag No. R D S O - B1/16014

Date: / /20

Page No.:

SPan 2:

Date	Flap	Detail of Material dimensions:	Remarks	Checked by welding Section:	
29.11.2024	Web 2A	Size 9700X1180X16mm	glop 2A	OK	SSE
	Flange: Top 2A	9700X510X28 mm			
	Bottom 2A	9700X510X40mm			JE/Fab
02/12/2024	Web 2B	Size 4000X1180X16mm	glop-2B	OK	SSE
	Flange Top 2B	4000X510X28mm			
	Bottom 2B	4000X510X40mm			JE/Fab
05/12/2024	Web 2C	Size 9700X1180X16mm	glop-2C	OK	SSE
	Flange Top 2C	9700X510X28mm			
	Bottom 2C	9700X510X40mm			JE/Fab
07.12.2024	Web 2D	Size 4000X1180X16mm	glop-2D	OK	SSE
	Flange Top 2D	4000X510X28mm			
	Bottom 2D	4000X510X40mm			SSE/Fab

12-2 m welded plate girder: W.O.No – 67971372
Span no. 3
Drg. no – RDSO – B/16014
Date: /20
Page No.:

Date	Flap	Detail of Material dimensions	Remarks		Checked by welding section
10-12-2024	Web 3A	Size 9700 x 1180 x 16 mm	flap - 3A	ok	SSE
	Flange: Top 3A	9700 x 510 x 28 mm			
	Bottom 3A	9700 x 510 x 40 mm			
12-12-2024	Web 3B	Size: 4000 x 1180 x 16 mm	flap - 3B	ok	SSE
	Flange: Top 3B	4000 x 510 x 28 mm			
	Bottom 3B	4000 x 510 x 40 mm			
14-12-2024	Web 3C	Size 9700 x 1180 x 16 mm	flap - 3C	ok	SSE
	Flange Top 2C	9700 x 510 x 28 mm			
	Bottom 3C	9700 x 510 x 40 mm			
18-12-2024	Web 3D	Size 4000 x 1180 x 16 mm	flap - 3D	ok	SSE
	Flange Top 3D	4000 x 510 x 28 mm			
	Bottom 3D	4000 x 510 x 40 mm			

SSE/FDZ

12.2m welded plate girder: 126 W.O.No - 67971372

Span no.4: Drg No - RDSO-B/16014

Date: / /20

Page No.:

Date	Flap	Detail of Material dimensions	Remarks	Checked by welding section:	
	Web	Size			
	4A	9700x1180x16mm			
21.12.2024	Flange		flap-4A	ok	SSE
	Top 4A	9700x570x28 mm			
	Bottom				
	4A	9700x570x40 mm			
	Web	Size			
	4B	4000x1180x16 mm			
24.12.2024	Flange				
	Top 4B	4000x570x28mm	flap-4B	ok	SSE
	Bottom				
	4B	4000x570x40mm			
	Web	Size			
	4C	9700x1180x16mm			
27.12.2024	Flange				SSE
	Top 4C	9700x570x28mm	flap-4C	ok	
	Bottom				
	4C	9700x570x40mm			
	Web	Size			
	4D	4000x1180x16mm			
30.12.2024	Flange		flap-4D	ok.	SSE
	Top 4D	4000x570x28mm			
	Bottom				SSE/FU2
	4D	4000x570x40mm			

Trial assembly record W.O. No. 67971372 04x12.2m WPG				
Span No.	Girder level (as per dwg.)	Dead load camber /Straightness	Observations	Sign of SSE/JE (with Dt.)
1/A	00	+1	OK	SSE 05/01/25
1/B	00	+1	OK	
2/A	00	+4	OK	SSE 15/01/25
2/B	00	+1	OK	
3/A	00	+1	OK	23/01/25 SSE/FU2
3/B	00	+1	OK	
4/A	00	+2	OK	10/02/25 SSE/FU2.
4/B	00	+1	OK	

WELDING REGISTER

Span no. 1 W.O.No – 67971372

12.2m WELDED PLATE GIRDER

Drg No:- RDSO/B-16014 / R2 series

Date: / /20
Page No.:

Sr No.	Date of welding	Girder component No.	joint	Welder's Name	WPSS No.	Consumable Wire
1.		I-Section Tack weld	Web 16mm M/S	Rajesh Tackweld	SBI/WPG/12-25T/R2/1.	
	20.11.2024	1A	T/P 28mm plate			A2
	22.11.24	1B				A2
	25.11.24	1C	Web 16mm M/S Btm Plate 40mm	Ashwin	— Do —	A2
	27.11.24	1D				A2
2.		I' section SAW				
	21.11.24	1A	Web-16mm M/S Top Pl-28mm	Ashwin	SBI/WPG/12-25T/R2/2	W1
	23.11.24	1B				W1
	26.11.24	1C	Web-16mm M/S Btm-40mm	Rajesh	— Do —	W1
	28.11.24	1D				W1
3.	2.12.24	Diaph I' Section SAW 1A	Web-12mm M/S flange 12mm	Ashwin	SBI/WPG/12-25T/R2/3	W1
	5.12.24	1B	— DO —		— DO —	W1
4.	26.11.24 to 29.11.24	End Stiff. GMAW span 1 ST	Web-16mm M/S Top Pl-28mm Btm Pl-40mm	Deepak	SBI/WPG/12-25T/R2/4	W1
5.	28.11.24 to 4.12.24	End Stiff. GMAW span 1 ST.	Web-16mm M/S Stiff-10mm	Bharat	SBI/WPG/12-25T/R2/8	W1

Consumable Module file	Parameter Current	Volt	Speed cm/min	Repair detail	Running Tab. No.	Remarks & Sign.
—	200	80	—	—		
—	200	80	—	—		
—	200	80	—	—		
—	200	80	—	—		
A-F1	630	28	32	Repaired	1/1	
A-F1	630	28	32	↑	1/2	
				do	1/3	
A-F1	630	30	31		1/4	
A-F1	628	30	31	↓		
F1	630	28	30	Repaired	1/5	
F1	629	30	31	Repaired	1/6	
—	260	30	—	—		
—						
—	950	28	—	—		

Span no. 2 W.O.No - 67771372

12.2M WELDED PLATE GIRDER

Date : / /20
Page No.:

Drg No. RDSO/B- 16014/R2

Date : / /20
Page No.:

Sr. No. / Date of welding	Date of welding	Component No.	Joint	Welder's Name	WPS No.	Consumable Use	Flux	Parameter Current	Parameter Volt	Parameter Speed cm/min	Repair detail	Runner tab No.	Remarks & Sign
1.		I-Section Fabricated	Web 16mm t/s T/p 28mm plate	Ashwin	SBI/WPQ/12.2m/25T/R2/1								
29.11.24		2A				A2	—	200	80	—	—		SSE
2.12.24		2B				A2	—	200	80	—	—		
5.12.24		2C	Web 16mm t/s	Bharat	— do —	A2	—	200	80	—	—		
7.12.24		2D	BTm plate 40mm			A2	—	200	80	—	—		
2.		I-Section SAW											
30.11.24		2A	Web 16mm t/s	Rajesh	SBI/WPQ/12.2m/25T/R2/2	W1	F1	625	28	32	Repaired	2/1	SSE
4.12.24		2B	Top plate 28mm			W1	F1	625	30	30	do	2/2	
6.12.24		2C	Web-16mm t/s			W1	F1	630	28	31		2/3	
9.12.24		2D	BTm-40mm	Ashwin	— do —	W1	F1	630	28	32		2/4	
3.		Diaph. I-section SAW	Web 12mm t/s flange 12mm	Deepak	SBI/WPQ/12.2m/25T/R2/3	W1	F1	625	30	30	Repaired	2/5	SSE
12.12.24		2A		—do—	— do —								
14.12.24		2B	— do —			W1	F1	625	30	32	Repaired	2/6	
4.		End — Stiffener GMAW	Web-16mm t/s		SBI/WPQ/12.2m/25T/R2/4	W1	—	250	30	—	—		SSE
2.12.24 to 8.12.24		Span 2nd.	Top plate 28mm BTm plate- 40mm	Bharat									
5.		Intermediate Stiffener GMAW	Web-16mm t/s	Bharat	SBI/WPQ/12.2m/25T/R2/5	W1	—	250	28	—	—		SSE
4.12.24 to 10.12.24		Span 2nd.	Stiffener 10mm										

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Span no. 3 W.O. No - 67971372 Drg no. RDSO/B - 16014/R2

12.2m welded plate girder

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Sr No.	Date of welding	Component No.	Joint	Welder Name	WPSS No.	Consumable wire	Flux	Parameter Current	Volt	Speed cm/min	Repair detail	Runner tab No.	Remarks & Sign.
		I-section Tack weld.											
1.													
1	10.12.24	3A	Web 16mm v/s T/p 28mm plate	Bharat	SBI/WPG/12.2m/25T/R2/1	A2	—	200	80	—	—		SSE
	12.12.24	3B				A2	—	200	80	—	—		JE/Fab
	14.12.24	3C	Web 16mm v/s Btm plate 40mm	Ashwin	— Do —	A2	—	200	80	—	—		SSE
	18.12.24	3D				A2	—	200	80	—	—		JE/Fab
		I-section SAW											
2.													
	11.12.24	3A	Web 16mm v/s Top plate 28mm	Deepak	SBI/WPG/12.2m/25T/R2/2	W1	F1	630	30	31	Repaired	3/1	
	13.12.24	3B				W1	F1	625	28	31	↑	3/2	SSE
	16.12.24	3C	Web 16mm v/s Btm-40mm	Ashwin	— Do —	W1	F1	625	28	32	do	3/3	
	19.12.24	3D				W1	F1	630	30	31	↓	3/4	JE/Fab
3.		Diaph. I-section SAW											
	20.12.24												
		3A	Web 12mm v/s Flange 12mm	Rajesh	SBI/WPG/12.2m/25T/R2/3	W1	F1	630	30	32	Repaired	3/5	SSE
	24.12.24	3B	— Do —	Rajesh	— Do —	W1	F1	625	28	30	Repaired	3/6	JE/Fab
4.	12.12.24 to 18.12.24	End Stiffener GMAW Span 3rd	Web-16mm v/s Top plate 28mm Btm plate 40mm	Bharat	SBI/WPG/12.2m/25T/R2/4	W1	—	250	28	—	—		SSE
5.	13.12.24 to 20.12.24	Intermediate Stiffener GMAW Span 3rd	Web 16mm v/s Stiffener 10mm	Ashwin	SBI/WPG/12.2m/25T/R2/5	W1	—	260	30	—	—		JE/Fab SSE/P&R

Span no. 4 - W.O.No. 67771372   Drg No - RDSO - B/ - 16014

12.2m welded plate girder

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Sr. No.	Date of welding	Component No.	Joint	Welder Name	WPSS No.	Consumable Wire	Flux	Parameter current	Volt	Speed cm/min	Repair detail	Runner tab No.	Remarks & Sign
1.	~~I Section Tack weld~~	I-Section Tack weld MMAW											
	24.12.24	4A	Web 16mm V/S T/P 28mm plate	Deepak	SBI/WPG/12.2m/25T/R2/1	A22	—	200	80	—	—		SSE
	24.12.24	4B				A22	—	200	80	—	—		
	27.12.24	4C	Web 16mm V/S BTM plate 40mm	Deepak	— Do —	A2	—	200	80	—	—		
	30.12.24	4D				A2	—	200	80	—	—		
2.	22.12.24	I-Section SAW											
	22.12.24	4A	Web 16mm V/S Top plate 28mm	Rajesh Saha	SBI/WPG/12.2m/25T/R2/2	W1	F1	625	28	32	Repaired	4/1	SSE
	26.12.24	4B				W1	F1	625	28	31	do	4/2	
	28.12.24	4C	Web 16mm V/S BTM-40mm	Dinesh	— Do —	W1	F1	630	30	32	do	4/3	
	31.12.24	4D				W1	F1	625	28	30	do	4/4	
3.		Diaph. I-Section SAW											
	1.01.25	4A	Web 12mm V/S flange 12mm	Dinesh	SBI/WPG/12.2m/25T/R2/3	W1	F1	625	28	32	Repaired	4/5	SSE
	3.01.25	4B	— Do —	Ashwin	— Do —	W1	F1	625	28	32	Repaired	4/6	
4.	24.12.24 to 30.12.24	End Stiffener (MMAW) Span 4th	Web-16mm V/S Top plate 28mm, BTM plate - 40mm	Bharat, Bharat	SBI/WPG/12.2m/25T/R2/4	W1	—	260	28	—	—		
5.	1.01.25 to 06.01.25	Intermediate Stiffener (MMAW) Span-4th	Web 16mm V/S Stiffener 10mm	Bharat	SBI/WPG/12.2m/25T/R2/8	W1	—	250	30	—	—		SSE

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DPT & MACRO ETCHING REGISTER

पश्चिम रेल
Western Railway

गुणवत्ता नियंत्रण प्रयोगशाला
इंजीनियरिंग कारख़ाना,
साबरमती, अहमदाबाद

MACRO ETCHING REPORT

Work Order No.: - 67971372 **Span Details: - 1st and 2nd ,12.2m WPG**

SM	POINT NO	WELD SIZE IN MM	HORZONTAL LEG LENGTH		VERTICAL LEG LENGTH		THROAT		ROOT PNT.		REMARKS	AFTER RECTIFIN.	SIGNATURE	
			H1	H2	V1	V2	T1	T2	R1	R2			CMS/CMA	SSE/JE
1A1	1	14MM	15	17	16	15	11	10	4	4	Satisfactory	-		
	2	14MM	16	14	15	15	11	11	4	4				
	3	14MM	17	15	14	14	11	10	3	3				
	4	14MM	14	16	15	16	10	11	4	4				
1A2	1	14MM	15	15	16	15	10	11	2	4	4	-		
	2	14MM	17	14	14	15	11	10	3	4				
	3	14MM	15	14	17	14	11	10	2	4				
	4	14MM	14	15	15	17	11	10	3	2				
1B1	1	14MM	15	15	17	16	10	10	4	2	4	-		
	2	14MM	15	16	14	17	11	11	4	3				
	3	14MM	15	14	17	17	10	10	4	2				
	4	14MM	16	17	16	15	10	11	3	3				
1B2	1	14MM	15	15	15	14	10	11	2	3	4	-	CMS/	
	2	14MM	14	16	14	14	11	11	2	3				
	3	14MM	17	15	14	17	10	10	2	2				
	4	14MM	14	16	16	16	10	10	2	3				
1ED1	1	6MM	6	-	7	-	5	-	2	-	4	-	QC 23/1/25	
	2	6MM	6	-	7	-	4	-	2	-				
	3	6MM	6	-	7	-	5	-	2	-				
	4	6MM	9	-	7	-	5	-	2	-				
1ED2	1	6MM	7	-	6	-	4	-	3	-	4	-		
	2	6MM	7	-	8	-	4	-	2	-				
	3	6MM	9	-	8	-	5	-	2	-				
	4	6MM	6	-	7	-	4	-	2	-				
2A1	1	14MM	17	16	17	17	10	11	4	2	Satisfactory	-		
	2	14MM	16	14	14	15	10	10	2	4				
	3	14MM	16	15	14	15	11	10	4	4				
	4	14MM	14	17	16	17	10	11	3	3				
2A2	1	14MM	17	17	16	15	11	10	2	4	4	-		
	2	14MM	17	14	15	17	10	10	4	3				
	3	14MM	15	14	16	15	10	10	3	3				
	4	14MM	15	14	15	17	10	10	3	4				
2B1	1	14MM	16	16	14	16	10	11	3	2	4	-	CMS/ QC 20/1/25	
	2	14MM	16	16	16	17	10	11	2	3				
	3	14MM	16	17	15	17	10	10	4	2				
	4	14MM	14	14	16	16	10	10	4	4				
2B2	1	14MM	16	14	14	17	10	10	4	3	4	-		
	2	14MM	14	16	16	16	10	10	3	3				
	3	14MM	17	14	16	15	11	11	2	3				
	4	14MM	16	15	16	14	10	10	4	3				
2ED1	1	6MM	7	-	8	-	5	-	2	-	4	-		
	2	6MM	8	-	9	-	5	-	2	-				
	3	6MM	9	-	7	-	4	-	2	-				
	4	6MM	6	-	6	-	4	-	2	-				
2ED2	1	6MM	9	-	9	-	4	-	3	-	4	-		
	2	6MM	7	-	6	-	5	-	2	-				
	3	6MM	6	-	8	-	5	-	3	-				
	4	6MM	9	-	7	-	4	-	3	-				

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साबरमती, अहमदाबाद

MACRO ETCHING REPORT

Work Order No.: - 67971372 **Span Details: - 3rd and 4th ,12.2m WPG**

SM	POINT NO	WELD SIZE IN MM	HORZONTAL LEG LENGTH		VERTICAL LEG LENGTH		THROAT		ROOT PNT.		REMARKS	AFTER RECTIFIN.	SIGNATURE	
			H1	H2	V1	V2	T1	T2	R1	R2			CMS/CMA	SSE/JE
3A1	1	14MM	15	17	16	14	11	10	3	4	Satisfactory	-		
	2	14MM	17	16	14	16	10	10	4	3				
	3	14MM	14	16	14	15	11	11	2	4				
	4	14MM	15	15	17	16	10	10	3	2				
3A2	1	14MM	15	16	17	15	10	11	2	2	"	-		
	2	14MM	14	15	16	14	10	11	2	4				
	3	14MM	14	14	16	17	11	10	4	2				
	4	14MM	15	16	17	14	11	10	2	3				
3B1	1	14MM	16	14	16	17	10	10	4	3	"	-		
	2	14MM	16	17	15	16	10	10	2	3				
	3	14MM	15	16	16	14	11	10	3	4				
	4	14MM	17	16	14	17	11	10	2	3				
3B2	1	14MM	16	17	14	16	10	10	2	4	"	-	CMS/ QC 03/2/25	
	2	14MM	14	16	17	14	11	10	4	4				
	3	14MM	14	16	17	15	11	10	3	4				
	4	14MM	14	14	17	15	11	10	2	3				
3ED1	1	6MM	7	-	8	-	4	-	3	-	"	-		
	2	6MM	9	-	8	-	5	-	2	-				
	3	6MM	8	-	9	-	5	-	2	-				
	4	6MM	9	-	8	-	4	-	3	-				
3ED2	1	6MM	9	-	9	-	5	-	3	-	"	-		
	2	6MM	7	-	8	-	5	-	2	-				
	3	6MM	9	-	8	-	4	-	3	-				
	4	6MM	9	-	7	-	5	-	3	-				
4A1	1	14MM	15	16	16	15	11	11	3	3	Satisfactory	-		
	2	14MM	14	17	17	17	11	11	2	4				
	3	14MM	17	16	16	15	11	11	4	3				
	4	14MM	17	15	17	16	11	10	2	4				
4A2	1	14MM	15	14	14	16	10	10	3	4	"	-		
	2	14MM	14	15	15	16	11	11	3	4				
	3	14MM	14	17	14	15	10	11	3	2				
	4	14MM	15	16	15	16	11	11	2	4				
4B1	1	14MM	17	14	17	15	10	11	4	2	"	-		
	2	14MM	16	15	14	15	11	10	3	4				
	3	14MM	14	14	16	14	10	11	4	3				
	4	14MM	14	17	16	14	11	10	3	4				
4B2	1	14MM	17	17	15	14	11	10	2	4	"	-	CMS/ QC 4/2/25	
	2	14MM	17	17	14	17	10	11	3	2				
	3	14MM	16	17	14	14	10	11	3	4				
	4	14MM	17	14	16	15	10	10	3	4				
4ED1	1	6MM	8	-	7	-	4	-	2	-	"	-		
	2	6MM	9	-	7	-	4	-	3	-				
	3	6MM	7	-	8	-	5	-	2	-				
	4	6MM	8	-	9	-	5	-	2	-				
4ED2	1	6MM	9	-	8	-	5	-	3	-	"	-		
	2	6MM	7	-	7	-	5	-	3	-				
	3	6MM	9	-	8	-	5	-	3	-				
	4	6MM	6	-	7	-	5	-	3	-				

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DPT REPORT

Work Order No.: - 67971372 (12.2m WPG) **Span details: 1st**

Sr No.	Date	S.M	Line No	WELD DEFECTS				Remarks	Signature		RECTIFICATION			
				Porosity/ Blow holes	Under cut	Crack	Welding/ Grinding		CMS/CMA	SSE/JE	Date	Remarks	Signature CMS/CMA	Signature SSE/JE
1	18/11/24	IA1 Long	1	3	–	–	–	Rectification required	RJ	JE				JE/FCR 19/11/24
			2	1	–	–	–							
			3	1	–	–	–							
			4	–	–	–	–							
2	27/11/24	IA2 Short	1	6	–	–	1	"	RJ	JE				JE/FCR 28/11
			2	3	–	–	1							
			3	–	–	–	–							
			4	–	–	–	–							
3	19/11/24	IB3 Long	1	–	–	–	–	"	RJ	JE		Satisfactory	CMS	JE/FCR 28/11
			2	2	–	–	–							
			3	1	–	–	–							
			4	–	–	–	–							
4	23/11/24	IB4 Short	1	–	–	–	–	"	RJ	JE			CQL	SE/FCR 28/11
			2	–	–	–	1							
			3	–	–	–	–							
			4	–	–	–	2							
5	17/2/25	IA1 STIFF.	1	2	–	–	–	"	RJ	SSE			17/2/25	SSE/FCR 16-12-25
			2	–	–	–	3							
		IA2 STIFF.	1	5	+	–	–							
			2	–	–	–	1							
		IB1 STIFF.	1	–	–	–	1							
			2	–	–	–	2							
		IB2 STIFF.	1	1	–	–	–							
			2	–	–	–	–							
6	"	IED1	-	–	–	–	–	"	RJ					
7		IED2	-	–	–	–	1							

गुणवत्ता नियंत्रण प्रयोगशाला
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DPT REPORT

Work Order No.: - 67971372 (12.2m WPG) **Span details: 2nd**

Sr No.	Date	S.M	Line No	WELD DEFECTS				Remarks	Signature		RECTIFICATION			
				Porosity/ Blow holes	Under cut	Crack	Welding/ Grinding		CMS/CMA	SSE/JE	Date	Remarks	Signature CMS/CMA	Signature SSE/JE
1	20/11/24	2A1	1	4	1	—	2	Rectification required	RS					
			2	6	—	—	3							
			3	4	—	—	1							
			4	—	—	—	2							
2	20/11/24	2A2	1	2	—	—	—	"	RS					
			2	—	—	—	—							
			3	—	—	—	1							
			4	—	—	—	2							
3	21/11/24	2B1	1	8	—	—	—	"	RS			Satisfactory		
			2	8	—	—	—							
			3	—	—	—	—							
			4	2	—	—	—							
4	21/11/24	2B2	1	3	—	—	1	"	RS					
			2	—	—	—	—							
			3	—	—	—	1							
			4	—	—	—	—							
5	17/2/25	1A1 STIFF.	1	—	—	—	1	"	RS					
			2	3	—	—	—							
		1A2 STIFF.	1	—	—	—	1							
			2	—	—	—	—							
		1B1 STIFF.	1	—	—	—	5							
			2	—	—	—	1							
		1B2 STIFF.	1	—	—	—	1							
			2	1	—	—	—							
6	4	1ED1	-	—	—	—	—	OK						
7	4	1ED2	-	—	—	—	—							

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DPT REPORT

Work Order No.: - 67971372 (12.2m WPG) **Span details:3rd**

Sr No.	Date	S.M	Line No	WELD DEFECTS				Remarks	Signature		RECTIFICATION			
				Porosity/ Blow holes	Under cut	Crack	Welding/ Grinding		CMS/CMA	SSE/JE	Date	Remarks	Signature CMS/CMA	Signature SSE/JE
1	23/11/24	3A1	1	3	—	—	1	Rectification required	RS	SSE/JE				
			2	1	1	—	—							
			3	—	—	—	—							
			4	1	—	—	1							
2	29/11/24	3A2	1	9	1	—	4	Rectification required	RS	SSE/JE				NA SSE
			2	3	—	—	1							
			3	—	—	—	—							
			4	—	—	—	—							
3	28/11/24	3B1	1	6	—	—	1	Rectification required	RS	SSE/JE		Satisfactory	CMS/QA 17/12/25	
			2	4	—	—	1							
			3	—	—	—	—							
			4	—	—	—	1							
4	28/11/24	3B2	1	—	—	—	—	"	RS	NA SSE				NA SSE
			2	1	—	—	—							
			3	—	—	—	—							
			4	—	—	—	1							
5	17/12/25	1A1 STIFF.	1	—	—	—	—	"	RS	NA SSE				SSE/JE/FOD
			2	1	—	—	—							
		1A2 STIFF.	1	—	—	—	—							
			2	—	—	—	—							
		1B1 STIFF.	1	1	—	—	—							
			2	—	—	—	1							
		1B2 STIFF.	1	—	1	—	—							
			2	—	—	—	—							
6	4	1ED1	-	—	—	—	—	OK						
7	4	1ED2	-	—	—	—	—							

गुणवत्ता नियंत्रण प्रयोगशाला
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DPT REPORT

Work Order No.: - 67971372 (12.2m WPG) **Span details:4th**

Sr No.	Date	S.M	Line No	WELD DEFECTS				Remarks	Signature		RECTIFICATION			
				Porosity/ Blow holes	Under cut	Crack	Welding/ Grinding		CMS/CMA	SSE/JE	Date	Remarks	Signature CMS/CMA	Signature SSE/JE
1	03/12/24	4A1	1	—	—	—	—	Rectification requirng	RS					
			2	1	—	—	1							
			3	—	—	—	1							
			4	5	—	—	—							
2	03/12/24	4A2	1	—	—	—	1	"	RS					
			2	—	—	—	—							
			3	—	—	—	—							
			4	1	—	—	—							
3	6/12/24	4B1	1	1	—	—	—	"	RS			Satisfactory		
			2	—	—	—	—							
			3	—	—	—	1							
			4	3	—	—	—							
4	07/12/24	4B2	1	—	—	—	2	"	RS				CMS/ QCL 13/2/25	
			2	1	—	—	—							
			3	3	—	—	—							
			4	—	—	—	1							
5	17/2/25	1A1 STIFF.	1	—	—	—	—	RS	RS					
			2	1	—	—	—							
		1A2 STIFF.	1	—	—	—	—							
			2	1	—	—	—							
		1B1 STIFF.	1	—	—	—	2							
			2	—	—	—	—							
		1B2 STIFF.	1	—	—	—	—							
			2	—	—	—	—							
6	〃	1ED1	-	—	—	—	—	OK						
7	〃	1ED2	-	—	—	—	—							

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WELDING CLEARANCE REPORT

पश्चिम रेल
Western Railway

गुणवत्ता नियंत्रण प्रयोगशाला
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साबरमती, अहमदाबाद

Letter No: - QCL/EWS/SBI/Inspection/67971372/1st to 4th Span

INSPECTION REPORT

Date: - 20.02.2025

Sub: - Welding inspection of components of 4x12.2 m WPG of W.O no 67971372

With reference to above subject welding inspection were carried out in STR shop. All fabricated Components of **4x12.2 m WPG** were checked as per approved QAP and WPSS and found satisfactory.

This is for your kind information and necessary action please.

20/2/25
CMS/QCL/EW/SBI

ACMT/EW/SBI 20/2/25

METALIZING AND PAINT REGISTER

Description	Metalizing thickness in microns	Final thickness after printing in microns	KLY Repre	Contra Repre
Spun no 1st	197, 185, 190, 176, 156, 164, 196, 201, 215	219, 221, 203, 185, 211, 175, 190, 233, 175, 182		
1st-Z	213, 202, 197, 185, 155, 177, 191, 184, 194	175 217, 222, 204, 186, 183, 234, 176, 183, 210,		
	193, 183, 198, 178, 158, 166, 195, 203, 214, 171 71	180, 189, 193, 218, 223, 205, 235, 177, 184, 211, 183, 193		
	172, 216, 204, 197, 167, 156, 179, 199, 184	196, 194, 209, 197, 219, 224, 185, 212, 219, 210, 197		
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