DISCLAIMER

The details like name of project, name of fabricator , etc. are indicative only. These should never be referred for any WPSS related matters. Only the technical details should be referred and followed for the WPSS purpose.

Model WPSS for
Railway BOW STRING GIRDER
(with SV Loading and Congestion Factor)

Railway BOW STRING GIRDER
(with SV Loading and Congestion Factor)
60.0m clear span 3 lane
Model WPSS No: RDSO/Infra-II/B&S/ROB/BSG/ WPSS/60.0series (41 Nos)

WELDING PROCEDURE SPECIFICATION SHEET (WORKSHOP)

60 MTR CLEAR SPAN
(BOW STRING STEEL GIRDER)
RDSO DRAWING NO:RDSO/B-10427 (SERIES)

Name of work: Construction of 2 lane ROB and its approaches in KM 158(old KM 153) on NH-104 at Jaynagar Bypass in the state of Bihar on EPC mode for the year 2021-22(job No.-104(New NH-227)-BR-2021-22-47).

Agreement No- 01/EPC/2022-23 Dated 20.05.2022

Fabricator (Regd. Office & Work Site):

M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.

Contractor:

M/s.RamKripal singh Construction Pvt.Ltd.

CLIENT:

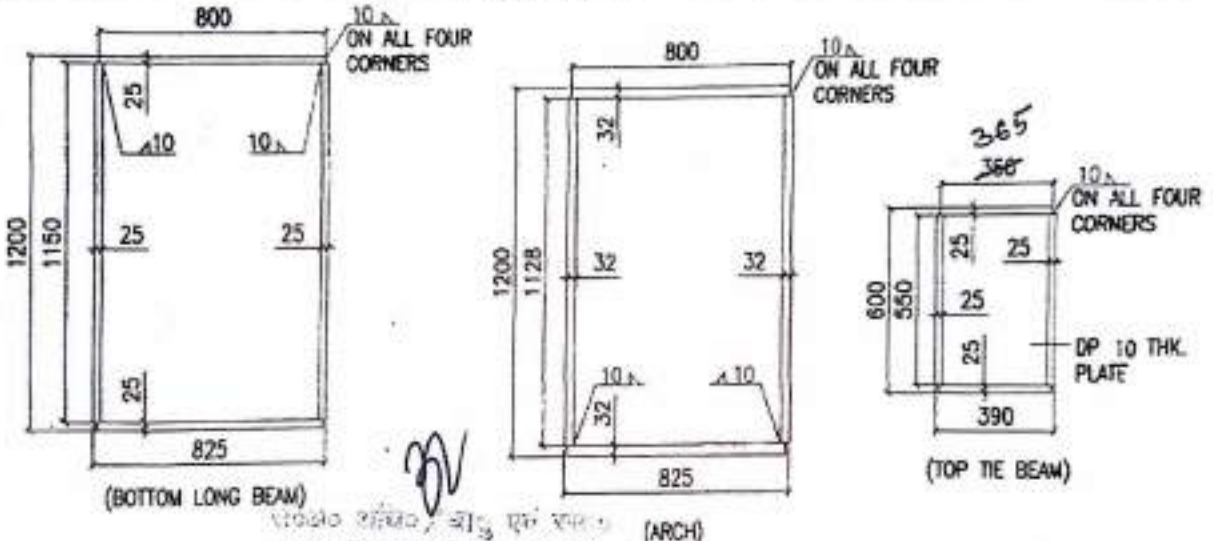
NATIONAL HIGHWAYS AUTHORITY OF INDIA(NHAI)

W.P.S.S. INDEX SHEET
60 MTR SPAN BOW STRING STEEL GIRDER
RDSO/B/10427 (SERIES)

WPSS NO	DESCRIPTION	WELD SIZE	PAGE NO.	REMARKS
SRMBS/RKSCPL/SHOP/WPS/60M/01	Bottom Long Beam, Arch & Top Tie Beam	10 mm	01-02	SAW
SRMBS/RKSCPL/SHOP/WPS/60M/02	Hanger Beam & Top Diagonal Tie Beam	10 mm	03-04	SAW
SRMBS/RKSCPL/SHOP/WPS/60M/03	End Bottom Cross beam	14 mm	05-06	SAW
SRMBS/RKSCPL/SHOP/WPS/60M/04	Intermediate Bottom Cross Beam	10 mm	07-08	SAW
SRMBS/RKSCPL/SHOP/WPS/60M/05	DP1 & DP2 at Bottom Long Beam	10 mm	09-10	FCAW
SRMBS/RKSCPL/SHOP/WPS/60M/06	DP at Arch Beam	10 mm	11-12	FCAW
SRMBS/RKSCPL/SHOP/WPS/60M/07	DP1 at Hanger	10 mm	13-14	FCAW
SRMBS/RKSCPL/SHOP/WPS/60M/08	DP at Top Tie Beam & Top Diagonal Tie Beam	10 mm	15-16	FCAW
SRMBS/RKSCPL/SHOP/WPS/60M/09	Web Splice at Intermediate Bottom Cross Beam	14 mm	17-18	FCAW
SRMBS/RKSCPL/SHOP/WPS/60M/10	Top Splice at Intermediate Bottom Cross Beam	14 mm	19-20	FCAW
SRMBS/RKSCPL/SHOP/WPS/60M/11	Bottom Splice at Intermediate Bottom Cross Beam	22 mm	21-22	FCAW
SRMBS/RKSCPL/SHOP/WPS/60M/12	Top & Bottom Splice at End Bottom Cross Beam	25 mm	23-24	FCAW
SRMBS/RKSCPL/SHOP/WPS/60M/13	Web Splice at End Bottom Cross Beam	20 mm	25-26	FCAW
SRMBS/RKSCPL/SHOP/WPS/60M/14	Stiffener at End & Intermediate Bottom Cross Beam	8 mm	27-28	FCAW
SRMBS/RKSCPL/SHOP/WPS/60M/15	Stud Welding of End Bottom Cross beam & Int. Bottom cross beam	7 mm	29-30	Arc stud with ferrule
SRMBS/RKSCPL/SHOP/WPS/60M/16	Tack Weld of all Component	5 mm	33-34	FCAW

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/01
01.	RDSO Drawing No.	:	RDSO/B-10427/1
02.	Welding Joint Description.	:	Fillet 10 mm - Bottom Long Beam, Arch & Top Tie Beam
03.	Base Metal.	:	25mmx25mm, 32mmx32mm, 25mmx25mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	S.A.W.
05.	Welding Position.	:	1F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Type Drying Method	: : : :	 W2 of IRS: M-39-2020. 4 mm Copper Coated Mild Steel Wire. N.A.
6.2	Flux Class Type Drying Method	: : :	 F2 OF IRS M 39 – 2020 Agglomerated. Recommended as per manufacturer.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, and Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) (Web with flange)



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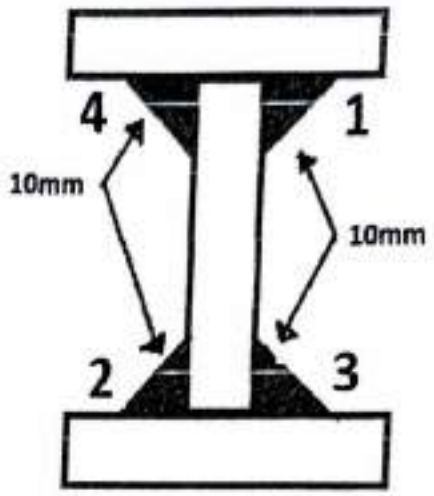
7.2	Joint preparation	:	As Per IS: 4353 – 1995, IS: 7215 & Welded Bridge Code.
08.	Welding Current Type Polarity	: : :	 DC Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

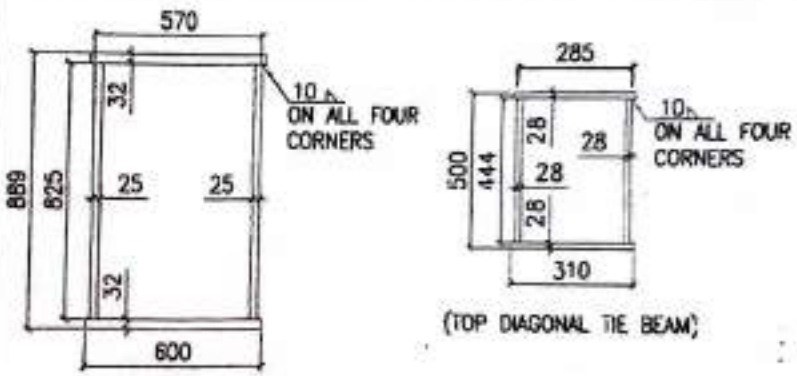
Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1	4	490 – 550	28 – 32	2.0 – 2.5	0.30 – 0.50	15 – 20	N.A.

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	Yes
12.	Cleaning of weld bead before laying next weld bead	:	N.A.
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual, D.P., MPT & Macro etching Test.
19.	Any other relevant Details	:	

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/02
01.	RDSO Drawing No.	:	RDSO/B-10427/1
02.	Welding Joint Description.	:	Fillet 10 mm - Hanger Beam & Top Diagonal Tie Beam b 20mm at both
03.	Base Metal.	:	32mmx25mm, 28mmX28mm IS: 2062 – 2011, Gr. : E350 B0 ends of Hanger
04.	Welding Process	:	S.A.W.
05.	Welding Position.	:	1F
06.	Welding Consumable.		
6.1	Electrode/Wire		
	Class	:	W2 of IRS: M-39-2020.
	Dia	:	4 mm
	Type	:	Copper Coated Mild Steel Wire.
	Drying Method	:	N.A.
6.2	Flux		
	Class	:	F2 OF IRS:M-39 – 2001
	Type	:	Agglomerated.
	Drying Method	:	Recommended as per manufacturer.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) (Web with flange)		 (HANGER) (TOP DIAGONAL TIE BEAM) , Also 20mm at extended part of Hanger Ends.
7.2	Joint preparation	:	As Per IS: 4353 – 1995, IS: 7215 & Welded Bridge Code
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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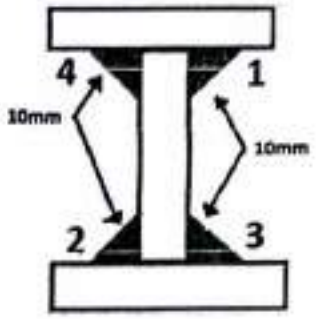
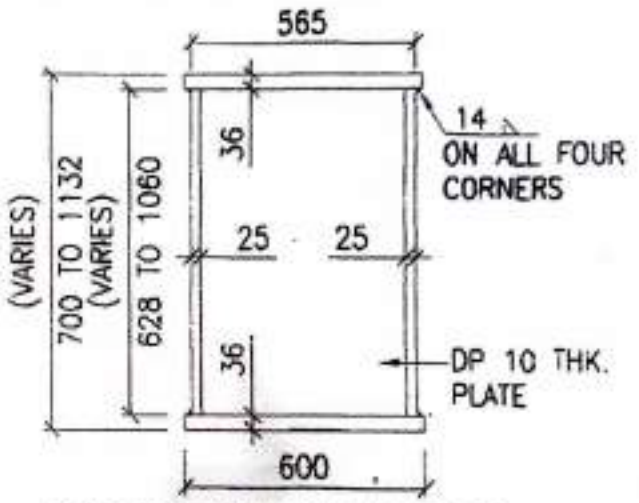
Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1 to 3	4	490 – 550	28 – 32	2.0 – 2.5	0.30 – 0.50	15 – 20	N.A.

10.2	Welding Sequence and technique	:	N.A.
			

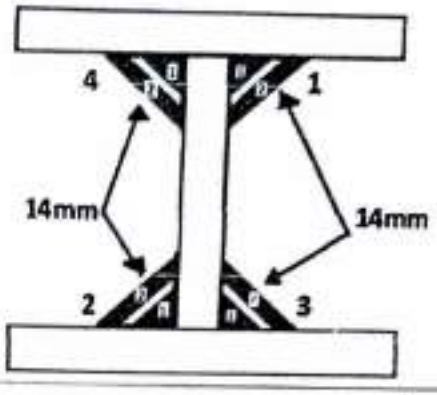
11.	Provision of run-on / run-off tabs	:	Yes
12.	Cleaning of weld bead before laying next weld bead	:	N.A.
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual, D.P., MPT & Macro etching Test.
19.	Any other relevant Details	:	

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Boral, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/03
01.	RDSO Drawing No.	:	RDSO/B-10427/1
02.	Welding Joint Description.	:	Fillet 14 mm – End Bottom Cross beam
03.	Base Metal.	:	25mmx25mm & 18mmx18mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	S.A.W.
05.	Welding Position.	:	1F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Type Drying Method	: : : :	 W2 of IRS: M-39-2020. 4 mm Copper Coated Mild Steel Wire. N.A.
6.2	Flux Class Type Drying Method	: : :	 F2 OF IRS:M-39 – 2001 Agglomerated. Recommended as per manufacturer.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) (Web with flange)		 END BOTTOM CROSS BEAM
7.2	Joint preparation	:	As Per IS: 4353 – 1995, IS: 7215 & Welded Bridge Code.
08.	Welding Current Type Polarity	: : :	 DC Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1	4	490 – 550	28 – 32	2.0 – 2.5	0.30 – 0.50	15 – 20	N.A.
2	4	490 – 550	28 – 32	2.0 – 2.5	0.30 – 0.50	15 – 20	N.A.

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	Yes
12.	Cleaning of weld bead before laying next weld bead	:	N.A.
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual, D.P., MPT & Macro etching Test.
19.	Any other relevant Details	:	

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/04
01.	RDSO Drawing No.	:	RDSO/B-10427/1
02.	Welding Joint Description.	:	Fillet 10 mm – Intermediate Bottom Cross Beam
03.	Base Metal.	:	16mmx20/28mm IS: 2062 – 2011, Gr.: E350 B0
04.	Welding Process	:	S.A.W.
05.	Welding Position.	:	Flat
06.	Welding Consumable.		
	Electrode/Wire		
6.1	Class	:	W2 of IRS: M-39-2020.
	Dia	:	4 mm
	Type	:	Copper Coated Mild Steel Wire.
	Drying Method	:	N.A.
	Flux		
6.2	Class	:	F2 OF IRS:M-39-2001
	Type	:	Agglomerated.
	Drying Method	:	Recommended as per manufacturer.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Intermediate Bottom cross beam		
7.2	Joint preparation	:	As Per IS: 4353 – 1995, IS: 7215 & Welded Bridge Code.
	Welding Current	:	
08.	Type	:	DC
	Polarity	:	Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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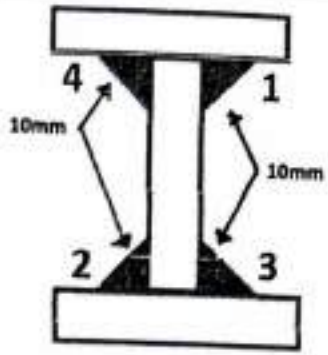
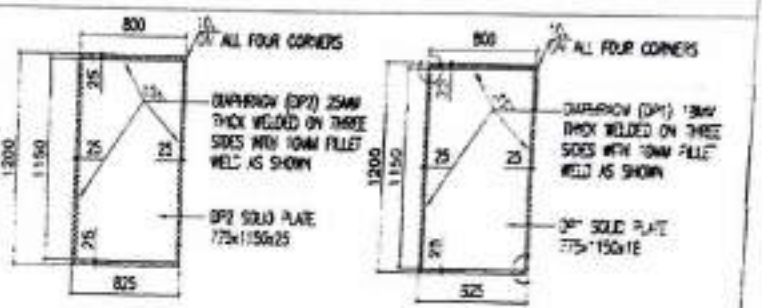
Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1	4	490 – 550	28 – 32	2.0 – 2.5	0.30 – 0.50	15 – 20	N.A.

10.2	Welding Sequence and technique	:	N.A.
			
11.	Provision of run-on / run-off tabs	:	Yes
12.	Cleaning of weld bead before laying next weld bead	:	N.A.
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual, D.P., MPT & Macro etching Test.
19.	Any other relevant Details	:	

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

	Name and address of Fabricator	:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
	Welding Procedure specification No.	:	SRMBS/RKSCPL/SHOP/WPS/60M/05
01.	RDSO Drawing No.	:	RDSO/B-10427/4 & RDSO/B-10427/5
02.	Welding Joint Description.	:	Fillet 10 mm – DP1 & DP2 at Bottom Long Beam
03.	Base Metal.	:	18MX25MM, 25mmx25mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	F.C.A.W. (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal /Vertical
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Type Drying Method	: : : :	 Class 1 of IRS M 46-2013 (AWS A5.20-10/ E71T-12). 1.2 mm Flux Cored Filler Wire. N.A.
6.2	Flux Class Type Drying Method	: : :	 N.A. N.A. N.A.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Diaphragm Plate with Arch, Bottom long beam, Top Tie Beam & Top Lateral Beam& (18MX25MM,18mmx32mm,18mmx32mm & 18mmx32mm)		
7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current Type Polarity	: : :	 DC Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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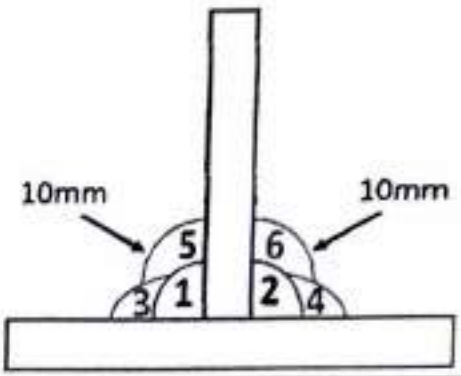
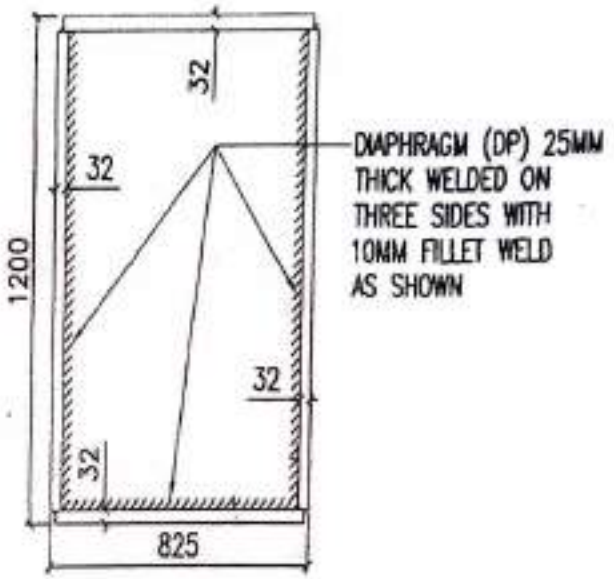
Weld Pass No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2	200 – 240	24 – 26	4 - 6	N.A.	13 - 18	13 - 16
3,4	1.2	200 – 240	24 – 26	4 - 6	N.A.	13 - 18	13 - 16
5,6	1.2	200 – 240	24 – 26	4 - 6	N.A.	13 - 18	13 - 16

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	Diaphragm Plate(DP1)Welding

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/06
01.	RDSO Drawing No.	:	RDSO/B-10427/4, RDSO/B-10427/9
02.	Welding Joint Description,	:	Fillet 10 mm – DP at Arch
03.	Base Metal,	:	25mmx32mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	F.C.A.W. (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal /Vertical
06.	Welding Consumable.		
6.1	Electrode/Wire		
	Class	:	Class I of IRS M 46-2020 (AWS A5.20-10/ E71T-12).
	Dia	:	1.2 mm
	Type	:	Flux Cored Filler Wire.
	Drying Method	:	N.A.
6.2	Flux		
	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) DP at Arch		
7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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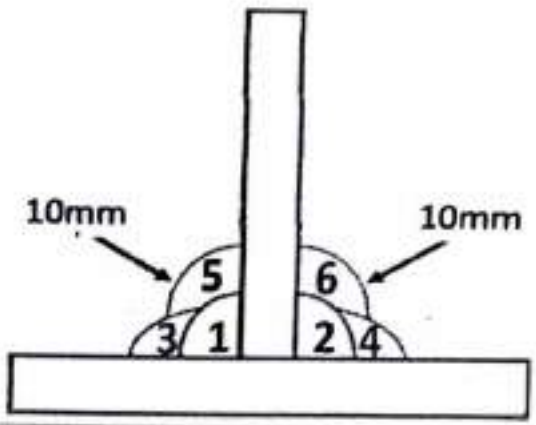
05.10.23

Weld Pass No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2	200 – 240	24 – 26	4 - 6	N.A.	13 - 18	13 - 16
3,4	1.2	200 – 240	24 – 26	4 - 6	N.A.	13 - 18	13 - 16
5,6	1.2	200 – 240	24 – 26	4 - 6	N.A.	13 - 18	13 - 16

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/07
01.	RDSO Drawing No.	:	RDSO/B-10425/9
02.	Welding Joint Description.	:	Fillet 10 mm – DP1 at Hanger
03.	Base Metal.	:	18mmx25/32mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	F.C.A.W. (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal /Vertical
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Type Drying Method	: : : :	 Class I of IRS M 46-2020 (AWS A5.20-10/ E71T-12). 1.2 mm Flux Cored Filler Wire. N.A.
6.2	Flux Class Type Drying Method	: : :	 N.A. N.A. N.A.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details (Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Diaphragm Plate with Hanger. (18mmx25/32MM)	:	
7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current Type Polarity	: : :	 DC Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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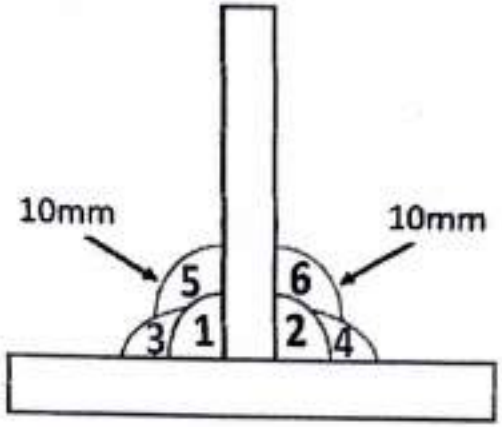
रेल मंत्रालय / Ministry of Railways
आ०उ०मा०सं०, लखनऊ / R.D.S.O., Lucknow

Weld Pass No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
3,4	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
5,6	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16

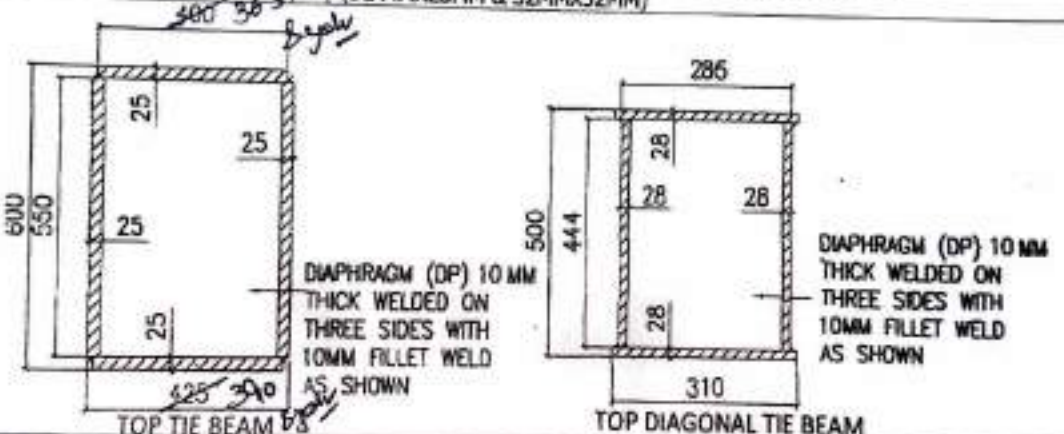
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

	Name and address of Fabricator	:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
	Welding Procedure specification No.	:	SRMBS/RKSCPL/SHOP/WPS/60M/08
01.	RDSO Drawing No.	:	RDSO/B-10427/3
02.	Welding Joint Description.	:	Fillet 10 mm - DP at Top Tie Beam & Top Diagonal Tie Beam
03.	Base Metal.	:	10mmx25mm, 12mmx28mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	F.C.A.W. (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal /Vertical
06.	Welding Consumable.		
	Electrode/Wire		
6.1	Class	:	Class I of IRS M 46-2020 (AWS A5.20-10/ E71T-12).
	Dia	:	1.2 mm
	Type	:	Flux Cored Filler Wire.
	Drying Method	:	N.A.
	Flux		
6.2	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.)
7.1			Diaphragm Plate with Arch Beam and Bottom long beam. (32 MMX25MM & 32MMX32MM)



7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
	Welding Current	:	
08.	Type	:	DC
	Polarity	:	Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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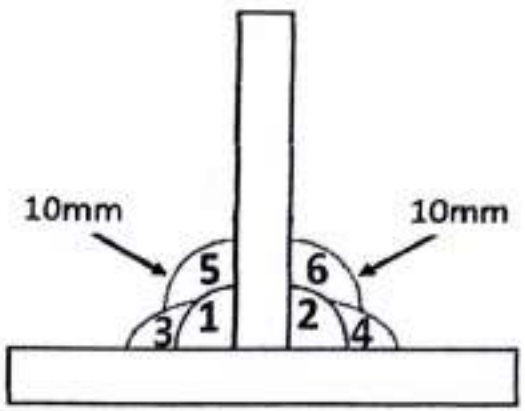
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
अ०अ०मा०सं०, लखनऊ / R.D.S.O., Lucknow

05.10.23

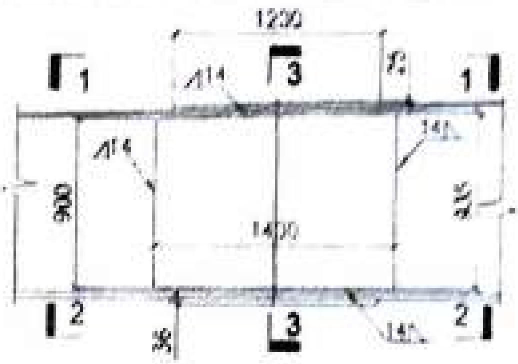
Weld Pass No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
3,4	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
5,6	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

	Name and address of Fabricator	:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
	Welding Procedure specification No.	:	SRMBS/RKSCPL/SHOP/WPS/60M/09
01.	RDSO Drawing No.	:	RDSO/B-10425/6
02.	Welding Joint Description.	:	Fillet 14 mm – Web Splice at Intermediate Bottom Cross Beam
03.	Base Metal.	:	16mmx16mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	F.C.A.W. (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal /Vertical
06.	Welding Consumable. Electrode/Wire		
6.1	Class	:	Class I of IRS M 46-2020 (AWS A5.20-10/ E71T-12).
	Dia	:	1.2 mm
	Type	:	Flux Cored Filler Wire.
	Drying Method	:	N.A.
6.2	Flux Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Web Splice at Intermediate Bottom Cross Beam (16MM X 16MM)		 WEB SPLICE PLATE AT INTERMEDIATE BOTTOM CROSS BEAM **SP1 & SP2**
7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
	Welding Current	:	
08.	Type	:	DC
	Polarity	:	Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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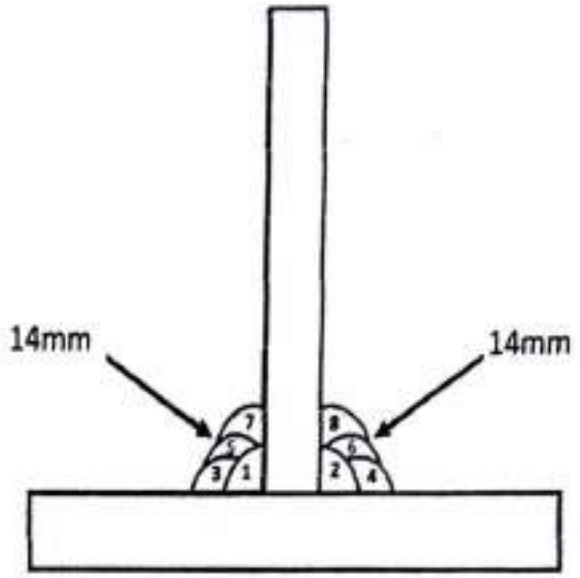
Weld Pass No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
3,4	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
5,6	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
7,8	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Inter pass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	

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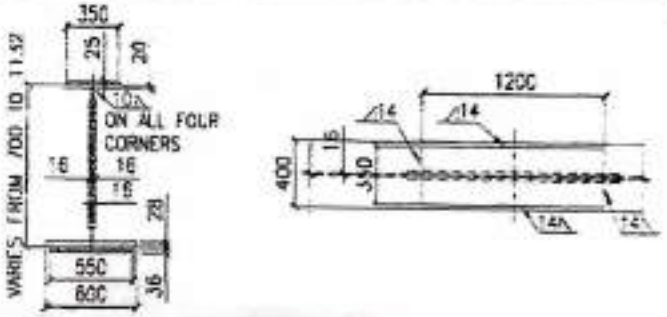
Asstt. Research Officer/M&C
अ०अ०सं०, लखनऊ / R.D.S.O. Lucknow

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/10
01.	RDSO Drawing No.	:	RDSO/B-10427/6
02.	Welding Joint Description.	:	Fillet 14 mm – Top Splice at Intermediate Bottom Cross Beam
03.	Base Metal.	:	20mmx25mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	F.C.A.W. (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal /Vertical
06.	Welding Consumable.		
6.1	Electrode/Wire		
	Class	:	Class I of IRS M 46-2020 (AWS A5.20-10/ E71T-12).
	Dia	:	1.2 mm
	Type	:	Flux Cored Filler Wire.
	Drying Method	:	N.A.
6.2	Flux		
	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Top Splice at Intermediate Bottom Cross Beam (20MM X 25MM)		 TOP SPLICE PLATE AT INTERMEDIATE BOTTOM CROSS BEAM SP1 & SP2
7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
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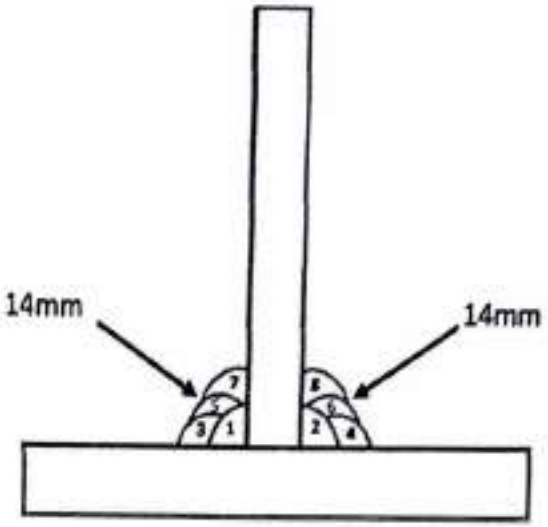
Weld Pass No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
3,4	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
5,6	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
7,8	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details		

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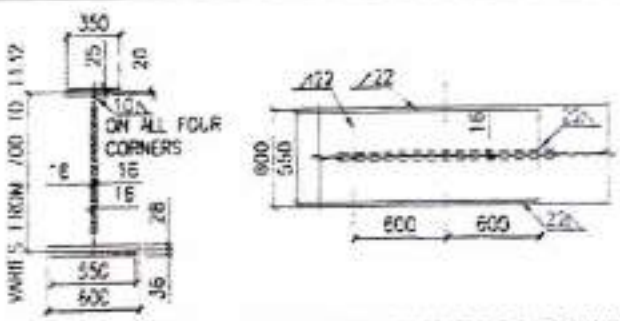
WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/11
01.	RDSO Drawing No.	:	RDSO/B-1042576 1042716 Typical
02.	Welding Joint Description.	:	Fillet 22 mm – Bottom Splice at Intermediate Bottom Cross Beam
03.	Base Metal.	:	36mmx28mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	F.C.A.W. (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal /Vertical
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Type Drying Method	: : : :	 Class I of IRS M 46-2020 (AWS A5.20-10/ E71T-12). 1.2 mm Flux Cored Filler Wire. N.A.
6.2	Flux Class Type Drying Method	: : :	 N.A. N.A. N.A.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Bottom Splice at Intermediate Bottom Cross Beam (36MM X 28MM)		 BOTTOM SPLICE PLATE AT INTERMEDIATE BOTTOM CROSS BEAM SP1 & SP2
7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current Type Polarity	: : :	 DC Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	

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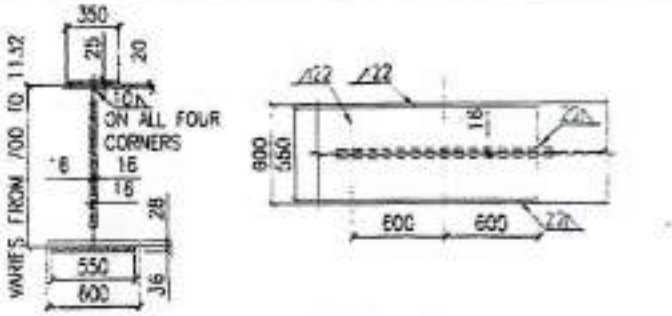
Assit. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
आरडीएसओ, लखनऊ / R.D.S.O., Lucknow

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Boral, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/11
01.	RDSO Drawing No.	:	RDSO/B-10425/6 10427/6 Typ
02.	Welding Joint Description.	:	Fillet 22 mm – Bottom Splice at Intermediate Bottom Cross Beam
03.	Base Metal.	:	36mmx28mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	F.C.A.W. (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal /Vertical
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Type Drying Method	: : : :	 Class 1 of IRS M 46-2020 (AWS A5.20-10/ E71T-12). 1.2 mm Flux Cored Filler Wire. N.A.
6.2	Flux Class Type Drying Method	: : :	 N.A. N.A. N.A.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Bottom Splice at Intermediate Bottom Cross Beam (36MM X 28MM)		 BOTTOM SPLICE PLATE AT INTERMEDIATE BOTTOM CROSS BEAM SP1 & SP2
7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current Type Polarity	: : :	 DC Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	

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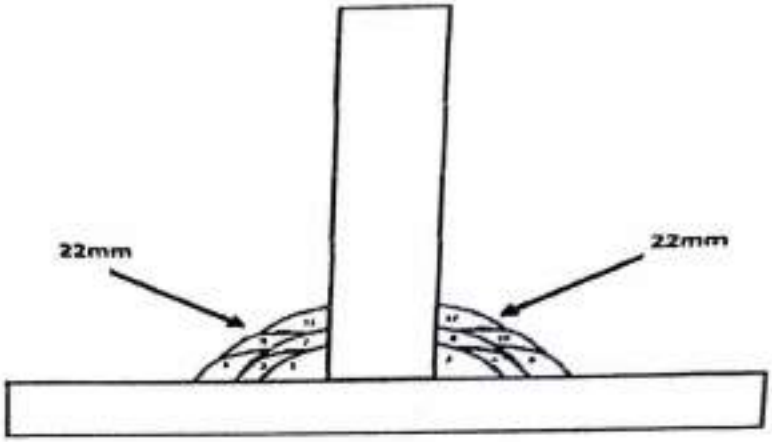
Weld Pass No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
3,4	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
5,6	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
7,8	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
9,10	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
11,12	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	

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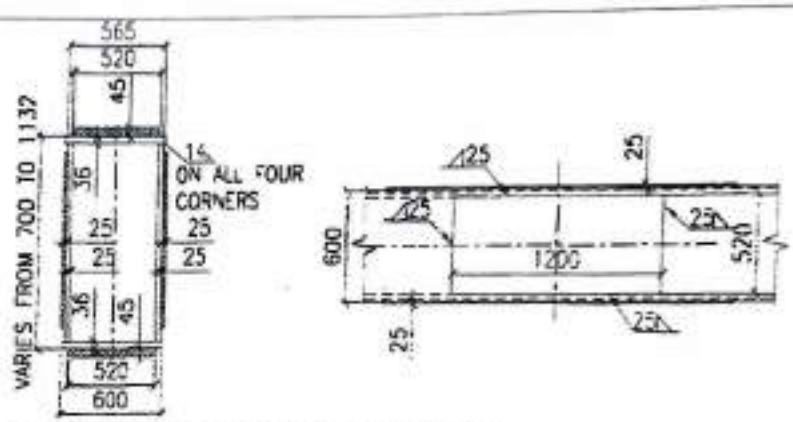
Asstt. Research Officer/Metal & Chem.

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/12
01.	RDSO Drawing No.	:	RDSO/B-10427/6
02.	Welding Joint Description.	:	Fillet 25 mm – Top & Bottom Splice at End Bottom Cross Beam
03.	Base Metal.	:	45mmx36mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	F.C.A.W. (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal /Vertical
06.	Welding Consumable.		
	Electrode/Wire		
6.1	Class	:	Class I of IRS M 46-2020 (AWS A5.20-10/ E71T-12).
	Dia	:	1.2 mm
	Type	:	Flux Cored Filler Wire.
	Drying Method	:	N.A.
	Flux		
6.2	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Top & Bottom Splice at Intermediate Bottom Cross Beam (45MM X 36MM)		 TOP & BOTTOM SPLICE PLATE AT END BOTTOM CROSS BEAM
7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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रेल मंत्रालय / Ministry of Railways
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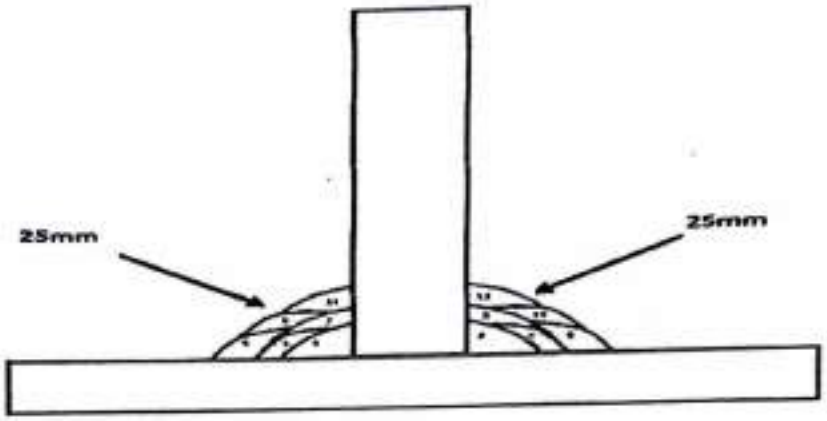
Weld Pass No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
3,4	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
5,6	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
7,8	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
9,10	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16
11,12	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 - 16

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Inter pass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	

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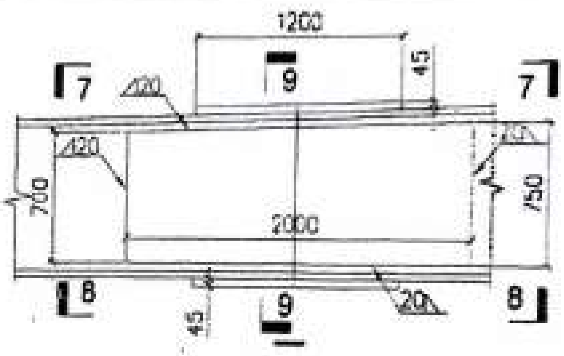
Asstt. Research Officer/M&C
अनुसंधान / Ministry of Railways
आ०डि०मा०सं०, लखनऊ / R.D.S.O., Lucknow

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

	Name and address of Fabricator	:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
	Welding Procedure specification No.	:	SRMBS/RKSCPL/SHOP/WPS/60M/13
01.	RDSO Drawing No.	:	RDSO/B-10425/9 10425/9
02.	Welding Joint Description.	:	Fillet 20 mm – Web Splice at End Bottom Cross Beam
03.	Base Metal.	:	45mmx36mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	F.C.A.W. (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal /Vertical
06.	Welding Consumable.		
	Electrode/Wire		
6.1	Class	:	Class I of IRS M 46-2020 (AWS A5.20-10/ E71T-12).
	Dia	:	1.2 mm
	Type	:	Flux Cored Filler Wire.
	Drying Method	:	N.A.
	Flux		
6.2	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Web Splice at End Bottom Cross Beam (45MM X 36MM)		 WEB SPLICE PLATE AT END BOTTOM CROSS BEAM SP3
7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
	Welding Current	:	
08.	Type	:	DC
	Polarity	:	Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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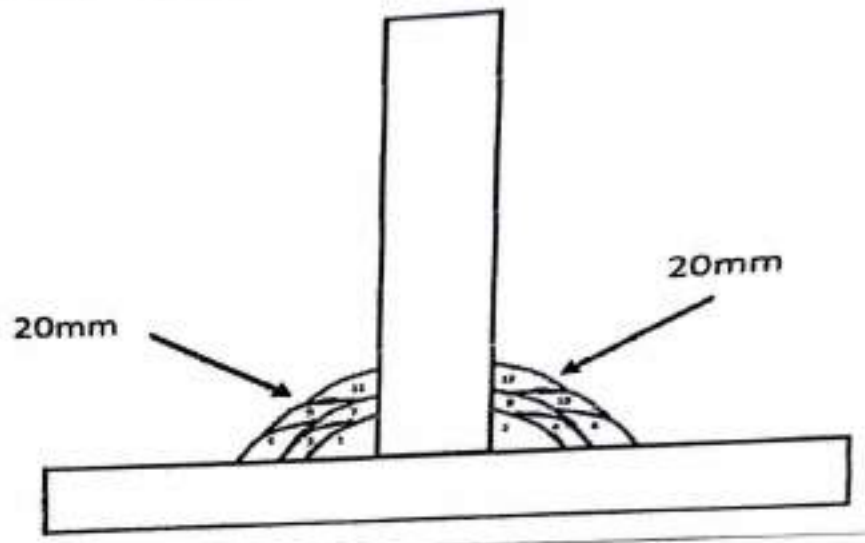
Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	

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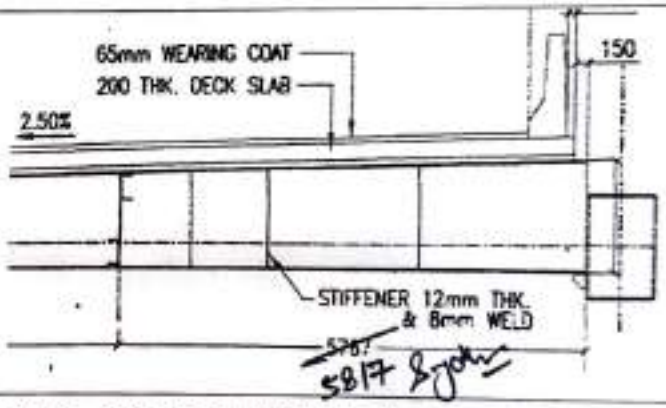
Asstt. Research Officer/M&C

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Boral, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/14
01.	RDSO Drawing No.	:	RDSO/B-10425/1 & RDSO/B-10425/6 10427/1 & 10427/6
02.	Welding Joint Description.	:	Fillet 8 mm – Stiffener at End & Intermediate Bottom Cross Beam
03.	Base Metal.	:	12mmx16/20/28mm & 12mmx25/36mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	F.C.A.W. (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal /Vertical
06.	Welding Consumable.		
6.1	Electrode/Wire		
	Class	:	Class I of IRS M 46-2020 (AWS A5.20-10/ E71T-12).
	Dia	:	1.2 mm
	Type	:	Flux Cored Filler Wire.
	Drying Method	:	N.A.
6.2	Flux		
	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	NA
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
	Joint design Details	:	
7.1	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) (12mmx16/20/28mm & 12mmx25/36mm)		
7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code, Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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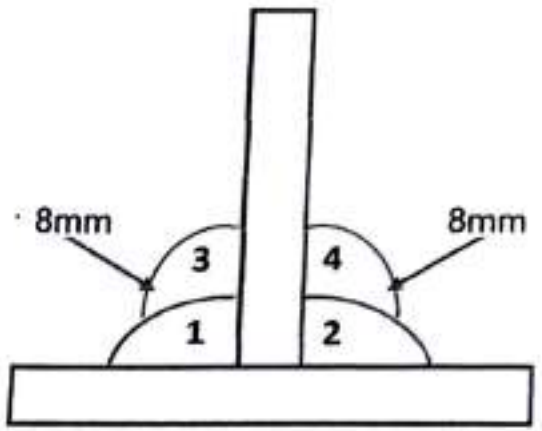
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
आ०अ०मा०सं०, लखनऊ / R.D.S.O., Lucknow

मुख्य कारखाना प्रबन्धक

Weld Pass No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 – 16
3,4	1.2	200 – 240	24 – 26	4 – 6	N.A.	13 - 18	13 – 16

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class 1 of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	

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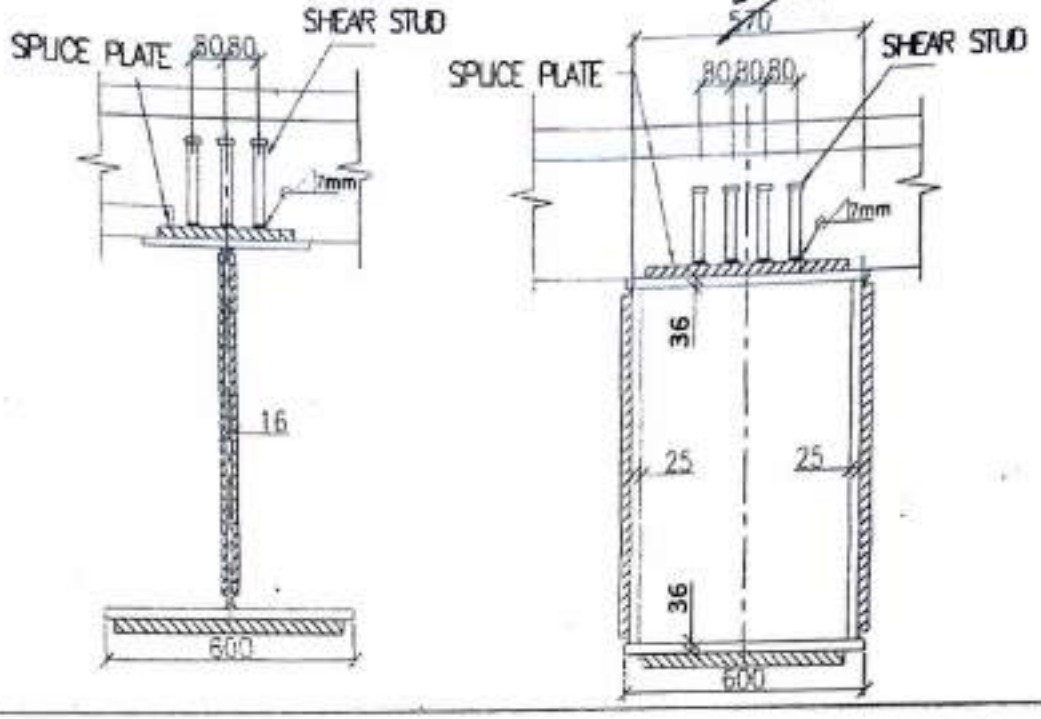
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
[illegible], R.D.S.O., Lucknow

Weld Sequence No.	Diameter of Stud (mm)	Current (Amps)	Time(Sec.)	Lift(mm)	Plunge(mm)
1	25	1850 - 2500	1.2 – 1.4	0.125	0.25

10.2 Welding Sequence and technique : N.A.



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	N.A.
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	N.A.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	Remove of defective stud & new stud weld after proper grinding of surface (As per RDSO BS : 115) Latest Revision
18.	Inspection of Weld	:	Visual, Ring Test, Bend Test, Verticality & Burn off length, Weld size,
19.	Any other relevant Details	:	

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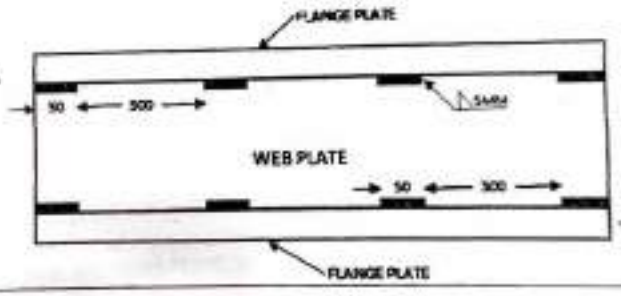
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
अoअoमाoसं०, लखनऊ / R.D.S.O., Lucknow

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 MCLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II,Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SHOP/WPS/60M/16
01.	RDSO Drawing No.	:	RDSO/B-10427 (SERIES)
02.	Welding Joint Description.	:	Fillet 5 mm Tack Weld - Tack Weld of all Component
03.	Base Metal.	:	IS: 2062 – 2011 E350/E250
04.	Welding Process	:	FCAW (Flux core Arc Welding)
05.	Welding Position.	:	Flat
06.	Welding Consumable.		
6.1	Electrode/Wire		
	Class	:	Class 1 of IRS M 46-2020 (AWS A5.20-10/ E71T-12).
			1.2 mm
	Type	:	Flux Cored Filler Wire.
	Drying Method	:	N.A.
6.2	Flux		
	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	CO_2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint, Rust etc., which may affected weld quality.
7.1	Joint design Details	:	N.A.
	(Sketch showing arrangements of parts, Weld bead details, Weld passes & their sequence etc. Length of track Weld 50mm Gap between two track Weld appr.300mm Weld Size		
7.2	Joint preparation	:	As Per IS: 1017B – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	Reverse
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

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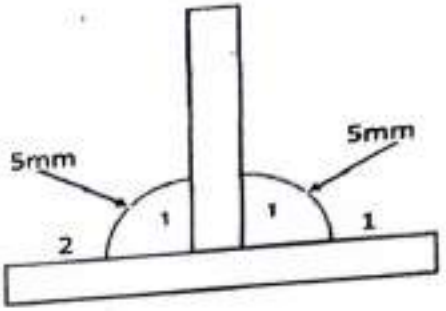
Weld Pass No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1	1.2	200 – 240	24 – 26	3.5 – 5.0	N.A.	13 - 18	13 – 16

10.2	Welding Sequence and technique	:	N.A.

Length of track Weld 50mm
Gap between two track Weld appr.300mm
Weld Size



11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	N.A.
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	N.A.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	By grinding of the defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
17.	Rectification of weld defect	:	Visual & DPT
18.	Inspection of Weld	:	
19.	Any other relevant Details		

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Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
अ०औ०गा०सं०, लखनऊ / R.D.S.O., Lucknow

WELDING PROCEDURE SPECIFICATION SHEET (SITE)

60 MTR CLEAR SPAN
(BOW STRING STEEL GIRDER)
RDSO DRAWING NO:RDSO/B-10427 (SERIES)

Name of work: Construction of 2 lane ROB and its approaches in KM 158(old KM 153) on NH-104 at Jaynagar Bypass in the state of Bihar on EPC mode for the year 2021-22(job No.-104(New NH-227)-BR-2021-22-47).

Agreement No- 01/EPC/2022-23 Dated 20.05.2022

Fabricator (Regd. Office & Work Site):

M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.

Contractor:

M/s.RamKripal singh Construction Pvt.Ltd.

CLIENT:

NATIONAL HIGHWAYS AUTHORITY OF INDIA(NHAI)

W.P.S.S. INDEX SHEET
60 MTR SPAN BOW STRING STEEL GIRDER
RDSO/B/10427 (SERIES)

WPSS NO	DESCRIPTION	WELD SIZE	PAGE NO.	REMARKS
SRMBS/RKSCPL/SITE/WPS/60M/17	Fillet Welding of Bow Arch(32mm) with Bottom Long Beam(25 mm)	20MM	1-2	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/18	Fillet welding of Bottom Long Beam(25mm) with Hanger(32mm)	22MM	3-4	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/19	Fillet welding of Arch Beam(32mm) Hanger(32mm)	25MM	5-6	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/20	Fillet welding of Top Tie Beam(25mm) with Hanger(32mm) and Top Diagonal Tie Beam(28mm) with hanger(32mm)/Arch(32mm)	18MM	7-8	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/21	Fillet welding of Channel(ISMC150) with Stiffener of Int.(12mm)& End Bottom Cross Beam(12mm)	6MM	9-10	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/22	Fillet welding of Top Tie Beam(25mm) with Top Lateral Beam(28mm)	18MM	11-12	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/23	Fillet welding of Int. Bottom Cross Beam (28mm) with Hanger (32mm).	12MM	13-14	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/24	Fillet welding of Int. Bottom Cross Beam (28mm) with Bottom Long Beam(25mm).	12MM	15-16	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/25	Fillet welding of Cover Plate(30mm) with End Bottom Cross Beam (36mm).	12MM	17-18	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/26	Fillet welding of Cover Plate (30mm) with Arch (32mm) & Cover Plate (30mm) with Bottom Long Beam (25mm).	22MM	19-20	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/27	Fillet welding of Stiffener(25mm) with Arch(32mm) & Bottom Long Beam(25mm)	20MM	21-22	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/28	Fillet welding of Stiffener(25mm) with Hanger(25mm) & Bottom Long Beam(25mm)	20MM	23-24	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/29	Fillet welding of Stiffener(25mm) with Bottom Long Beam(25mm) & Int. Bottom Cross Beam(28mm)	20MM	25-26	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/30	Fillet welding of Stiffener(25mm) with End Bottom Cross Beam(36mm) with Cover Plate(30mm)	20MM	27-28	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/31	Fillet welding of Stiffener(25mm) with Int. Bottom Cross Beam(28mm) with Hanger(32mm)	20MM	29-30	FCAW

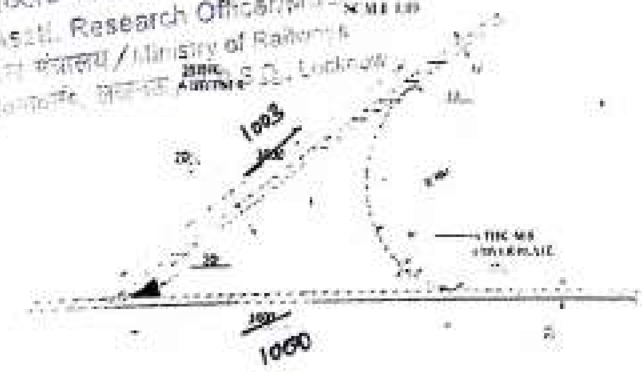
W.P.S.S. INDEX SHEET
60 MTR SPAN BOW STRING STEEL GIRDER
RDSO/B/10427 (SERIES)

WPSS NO	DESCRIPTION	WELD SIZE	PAGE NO.	REMARKS
SRMBS/RKSCPL/SITE/WPS/60M/32	Fillet welding of Stiffener(25mm) with Arch(32mm) & Hanger(25mm) and Stiffener(25mm) with Bottom Long Beam(25mm) & Hanger(25mm)	20MM	31-32	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/33	Fillet welding of Stiffener(32mm) with Top Diagonal Tie Beam(28mm) & Arch(32mm) and Top Diagonal Tie Beam(28mm) & Hanger(32mm)	22MM	33-34	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/34	Fillet welding of Stiffener (25mm) with Top Tie Beam (25mm) & Hanger (32mm).	22MM	35-36	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/35	Fillet Welding of Angle(150x150x15) with Int. Bottom Cross Beam(16mm) & Bottom Long Beam(25mm) and Angle(150x150x15) with Int. Bottom Cross Beam(16mm) & Hanger(32mm)	12MM	37-38	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/36	Fillet Welding of Angle(150x150x15) with Cover Plate(30mm) & End Bottom Cross Beam(25mm)	12MM	39-40	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/37	Fillet Welding of Web Splice Plate(32mm) with Bottom Long Beam(25mm)	22MM	41-42	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/38	Fillet Welding of Top & Bottom Splice Plate(32mm) with Bottom Long Beam(25mm)	20MM	43-44	
SRMBS/RKSCPL/SITE/WPS/60M/39	Fillet welding of Splice Plate(40mm) of Arch(32mm).	28MM	45-46	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/40	Fillet welding of Cover plate (6mm) with Arch (32mm) and Bottom Long Beam(25mm).	6MM	47-48	FCAW
SRMBS/RKSCPL/SITE/WPS/60M/41	Tack weld.	5MM	49-50	FCAW

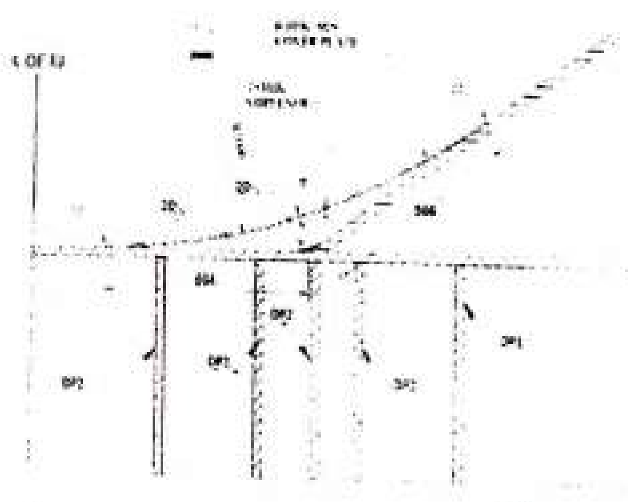
WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/17
01.	RDSO Drawing No.	:	RDSO/B-10427/4
02.	Welding Joint Description.	:	Fillet 20 mm – Fillet Welding of Bow Arch with Bottom Long Beam
03.	Base Metal.	:	32mmx25mm IS: 2062 – 2011, Gr. : E350 BO
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F,3F,4F
06.	Welding Consumable.		
6.1	Electrode/Wire		
	Class	:	Class I OF IRS: M-46-~~2003~~ 2020, Flux cored MS wire.
	Dia	:	1.2 mm
	Drying Method	:	N.A.
6.2	Flux		
	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	CO_2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.)		
	Fillet Welding of Bow Arch with Bottom Long Beam(32 mm with 25 mm)		

सहायक अनुसंधान अधिकारी / धातु एवं रसायन
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways



DETAIL - 3



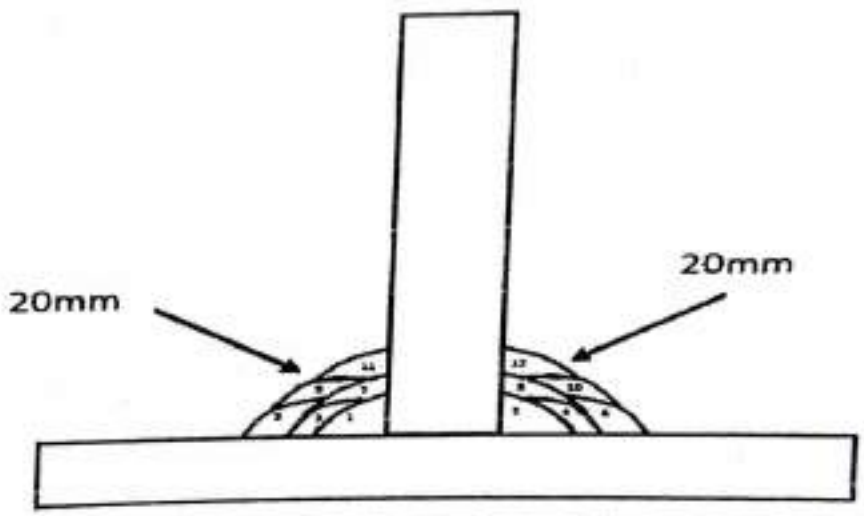
DETAIL - 2

मुख्य कारखाना प्रबंधक / बी.आर.एस.

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25

10.2	Welding Sequence and technique	:	N.A.



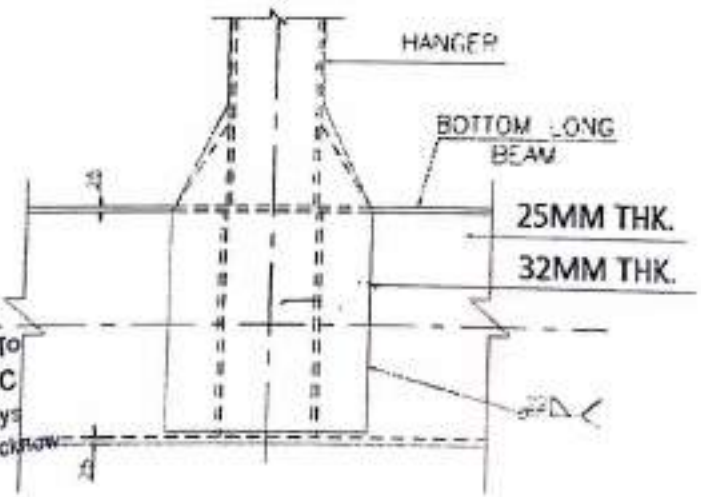
11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual,& D.P
19.	Any other relevant Details	:	

सं०अ० अधि० / धातु एवं प्रक्रिया
Asstt. Research Officer/M&P
रेल मंत्रालय / Ministry of Railways
आ०सं०, लखनऊ / R.D.S.O., Lucknow

मुख्य कारखाना प्रबंधक / चीफ वर्क्स
Chief Workshop Manager

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/18
01.	RDSO Drawing No.	:	RDSO/B-10427/5 & RDSO/B-10427/9
02.	Welding Joint Description.	:	Fillet 22 mm – Fillet welding of Bottom Long Beam with Hanger
03.	Base Metal.	:	25mmx32mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F, 4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	 Class I OF IRS: M-46-2003, Flux cored MS wire. (2020) 1.2 mm N.A.
6.2	Flux Class Type Drying Method	 : : :	 N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, and Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Bottom Long Beam with Hanger (25mmx32mm)		

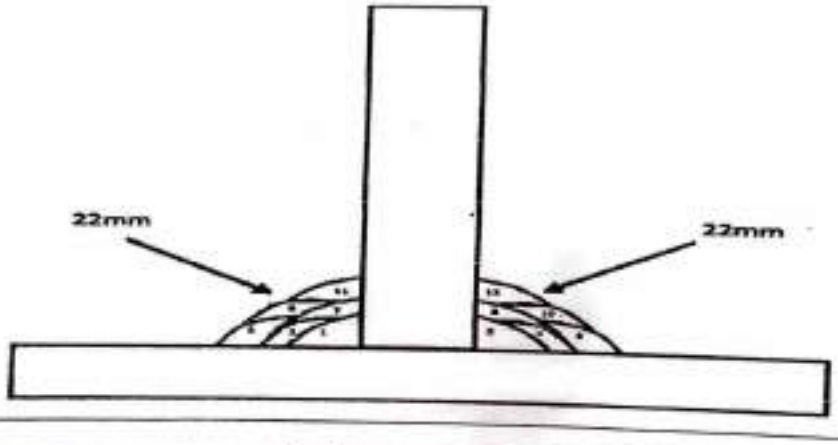


सo अ० अधि० / धातु एवं रसा०
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
आ०अ०मा०सं०, लखनऊ / R.D.S.O., Lucknow

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25

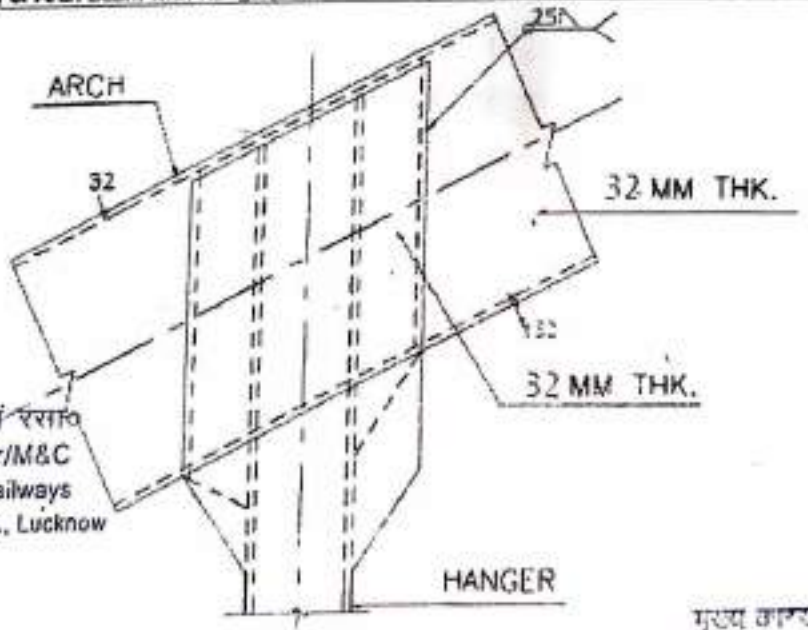
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/19
01.	RDSO Drawing No.	:	RDSO/B-10427/2 & RDSO/B-10427/9
02.	Welding Joint Description.	:	Fillet 25 mm – Fillet Welding of Arch Beam with Hanger
03.	Base Metal.	:	32mmx32mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F, 4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2020, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, and Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details (Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Arch Beam with Hanger(32mm & 32mm)	:	



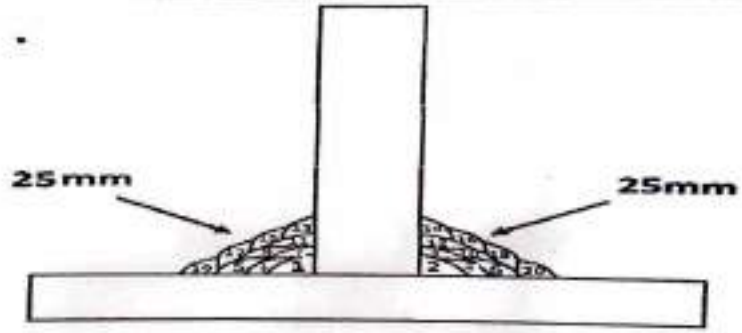
रा०अ० अधि० / धातु एवं रसा०
Assit. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
अ०उ०मा०सं०, लखनऊ / R.D.S.O., Lucknow

मुख्य कारखाना प्रबंधक / सी०डब्ल्यू०
Chief Works Manager/BW

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
13,14	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
15,16	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
17,18	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
19,20	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25

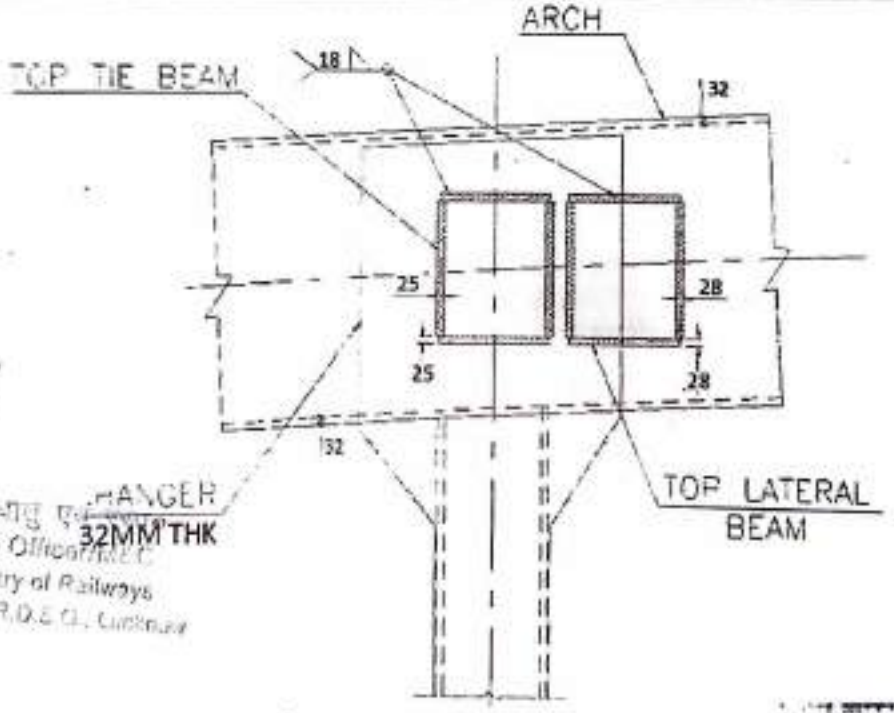
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the defects per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
	Any other relevant Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Boral, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/20
01.	RDSO Drawing No.	:	RDSO/B-10427/3
02.	Welding Joint Description.	:	Fillet 18 mm - Fillet welding of Top Tie Beam with Hanger and Top Diagonal Tie Beam with hanger/Arch
03.	Base Metal.	:	25mmx32mm & 28mmx32/32mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details (Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Top Tie Beam with Hanger and Top Diagonal Tie Beam with hanger/Arch (25mmx32mm and 28mmx32/32mm)	:	



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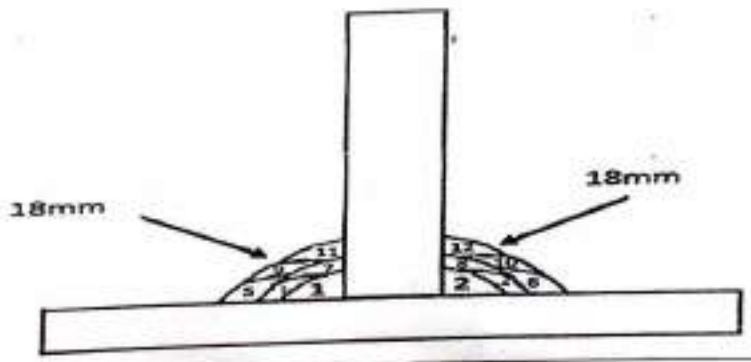
Ministry of Railways

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25

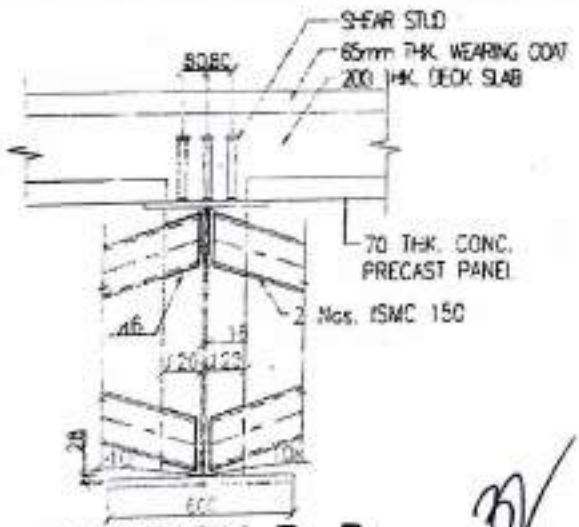
10.2	Welding Sequence and technique	:	N.A.



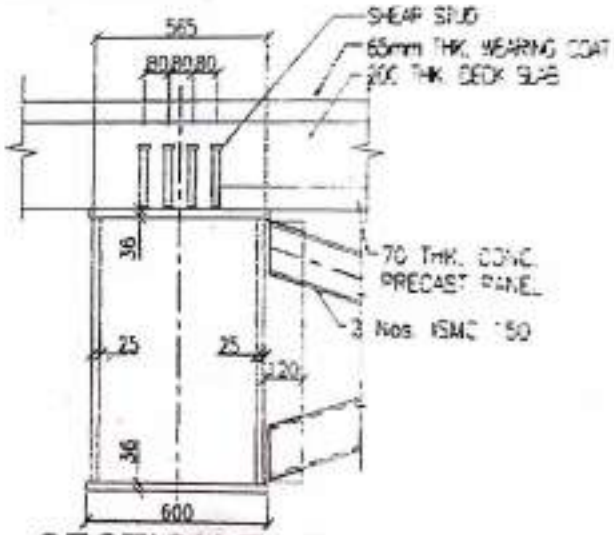
11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defects	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P
	other relevent Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/21
01.	RDSO Drawing No.	:	RDSO/B-10427/1, RDSO/B-10427/6
02.	Welding Joint Description.	:	Fillet 6 mm - Fillet welding of Channel(ISMC150) with Stiffener of Int.& End Bottom Cross Beam
03.	Base Metal.	:	ISMC150x12mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details (Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Channel(ISMC150) with Stiffener of Int.& End Bottom Cross Beam	:	



SECTION B -B



SECTION E -E

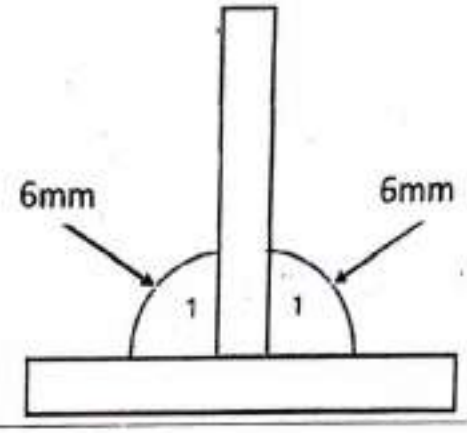
स०अ० अधि० / धातु एवं रसा०
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
आ०अ०मा०सं०, लखनऊ / R.D.S.O., Lucknow

प्रबन्धक / डी०डब्लू०

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

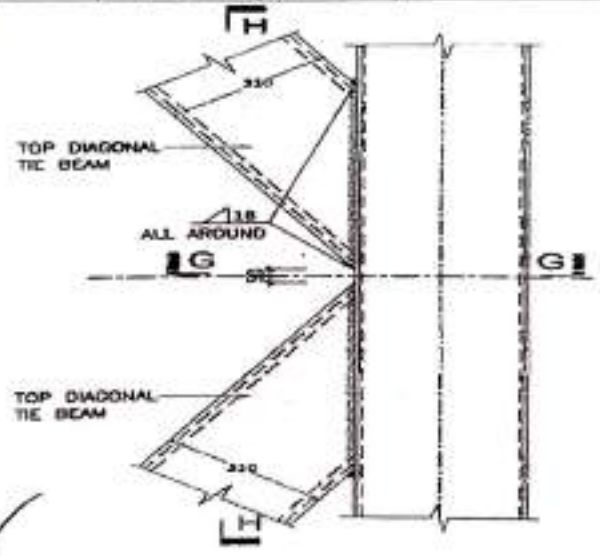
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	N.A.
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	Fillet size connecting top lateral bracing and arch not mentioned in a drawing considered 25mm fillet with reference to connection between top tie beam and hanger.

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/22
01.	RDSO Drawing No.	:	RDSO/B-10427/3
02.	Welding Joint Description.	:	Fillet 18 mm - Fillet welding of Top Tie Beam with Top Lateral Beam
03.	Base Metal.	:	25mmx28mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Top Tie Beam with Top Lateral Beam. (25mmx28mm)		

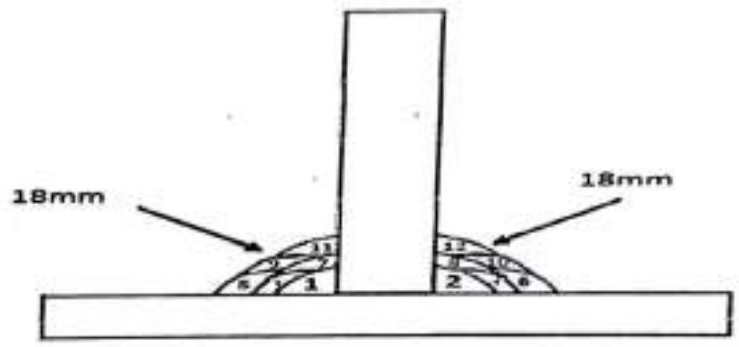


वरि० अधि० / धातु एवं रसा०

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

10.2	Welding Sequence and technique	:	N.A.

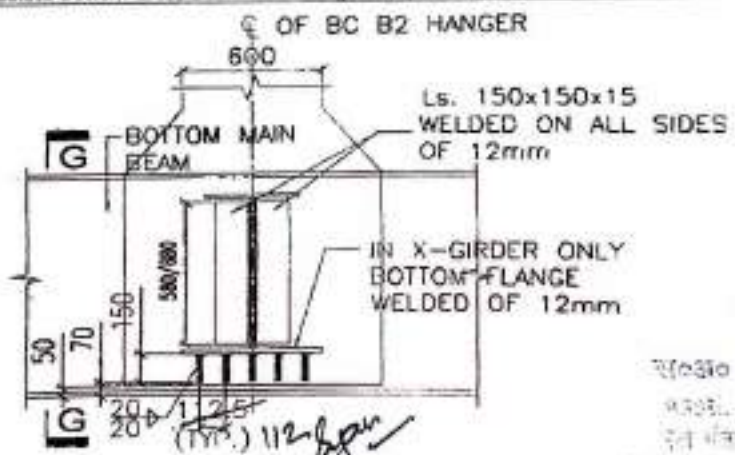


11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P
19.	Any other relevant Details	:	

वरि० अधि० / धातु एवं रसा०

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/23
01.	RDSO Drawing No.	:	RDSO/B-10427/6
02.	Welding Joint Description.	:	Fillet 12 mm – Fillet welding of Int. Bottom Cross Beam (28mm) with Hanger (32mm).
03.	Base Metal.	:	28mmx32mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, and Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Intermediate Bottom Cross Beam with Hanger Only Bottom Flange Welded.		



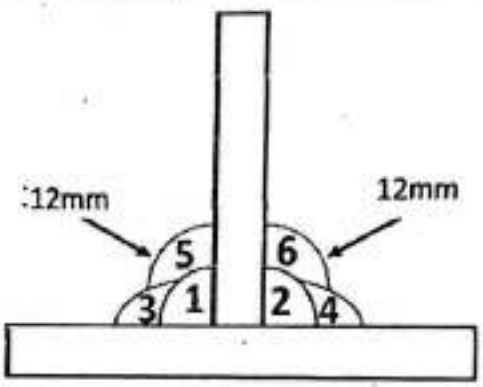
CONNECTION DETAILS - BC B2

अनुसंधान अधिकारी / खान एवं धनबाद
Asstt. Research Officer M&C
रेल मंत्रालय / Ministry of Railways
Dhanbad, RDSO

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25

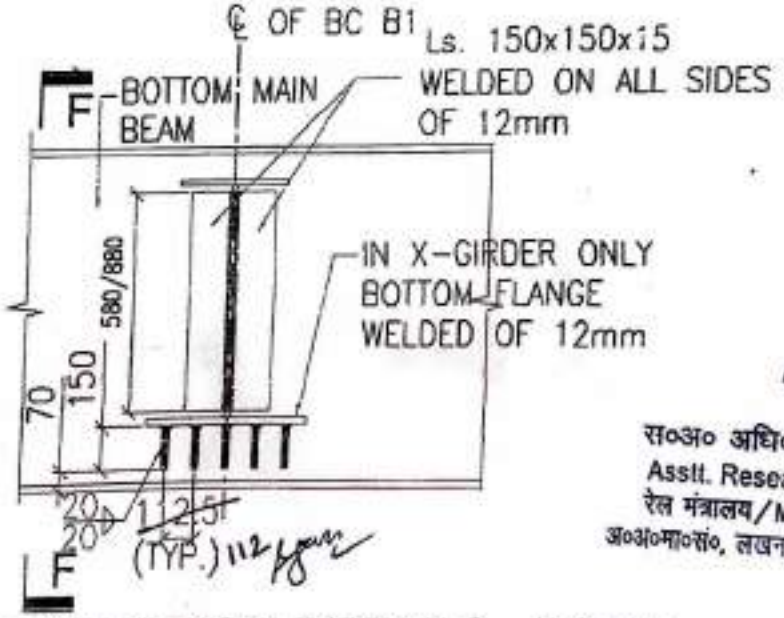
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P
19.	Any other relevant Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Boral, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/24
01.	RDSO Drawing No.	:	RDSO/B-10427/6
02.	Welding Joint Description.	:	Fillet 12mm - Fillet welding of Int. Bottom Cross Beam with Bottom Long Beam
03.	Base Metal.	:	28mmx25mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details (Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Bottom Cross Beam with Bottom Long Beam Except Top Flange.	:	



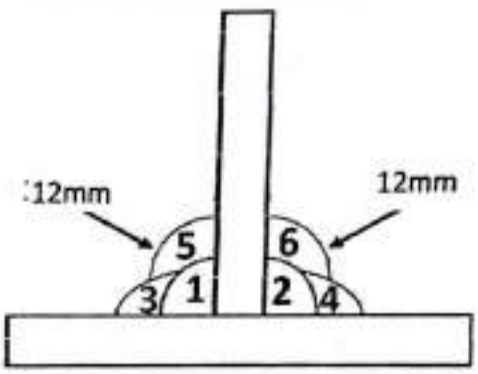
सं०अ० अधि० / धातु एवं रसा०
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
अ०अ०मा०सं०, लखनऊ / R.D.S.O., Lucknow

℄CONNECTION DETAILS - BC B1

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
5,6,	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25

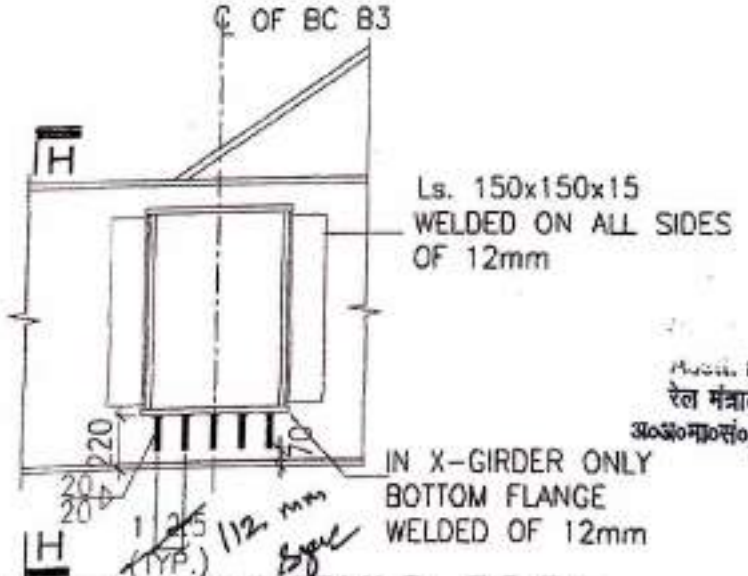
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P
19.	Any other relevant Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/25
01.	RDSO Drawing No.	:	RDSO/B-10427/6
02.	Welding Joint Description.	:	Fillet 12 mm - welding Cover plate with End Bottom Cross Beam
03.	Base Metal.	:	30mmx36mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding Cover plate with End Bottom Cross Beam Only Bottom Flange.		



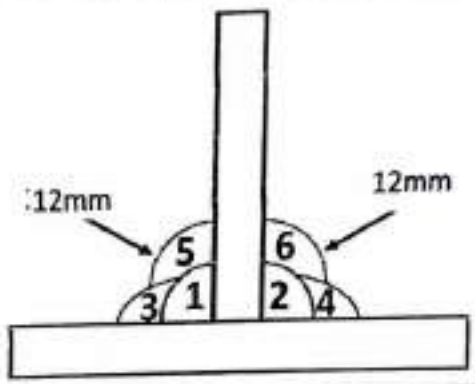
CONNECTION DETAILS - BC B3

Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
आरडीएसओ, लखनऊ / R.D.S.O., Lucknow

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	180 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25

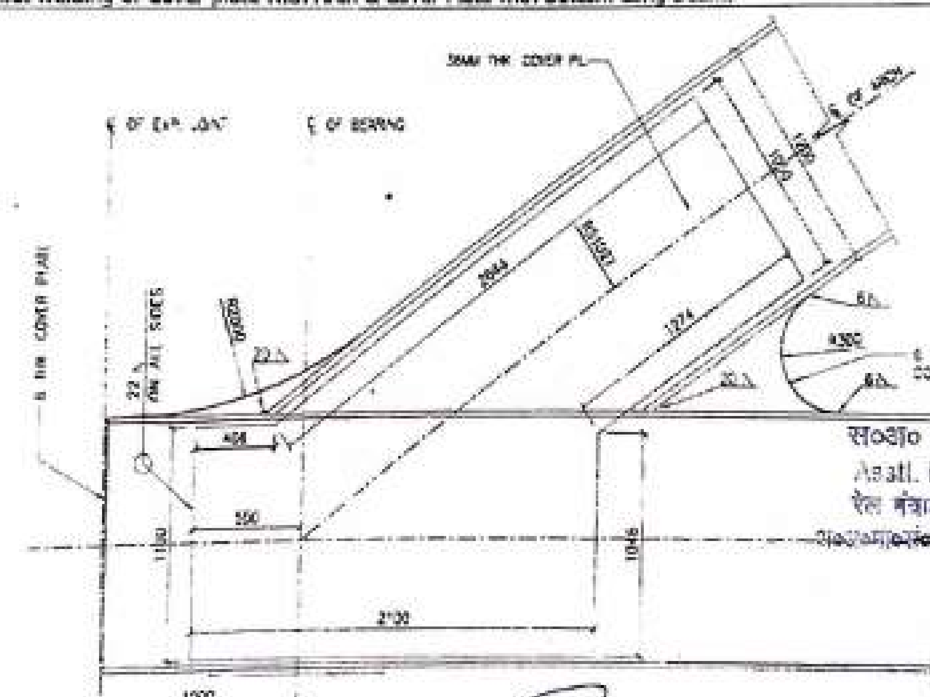
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Boral, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/25
01.	RDSO Drawing No.	:	RDSO/B-10427/4
02.	Welding Joint Description.	:	Fillet 22 mm - Fillet welding of Cover plate with Arch & Cover Plate with Bottom Long Beam
03.	Base Metal.	:	30mmx32mm, 30mmX25mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire		
	Class	:	Class I OF IRS:M-46-~~2003~~ 2020, Flux cored MS wire.
	Dia	:	1.2 mm
	Drying Method		N.A.
6.2	Flux		
	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	CO_2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, and Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Cover plate with Arch & Cover Plate with Bottom Long Beam.		

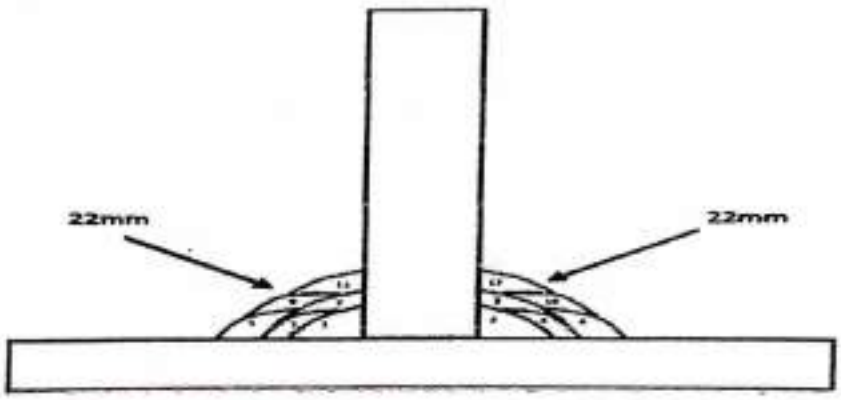


सं०अ० अधि० / धातु एवं रसायन
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

10.2	Welding Sequence and technique	:	N.A.

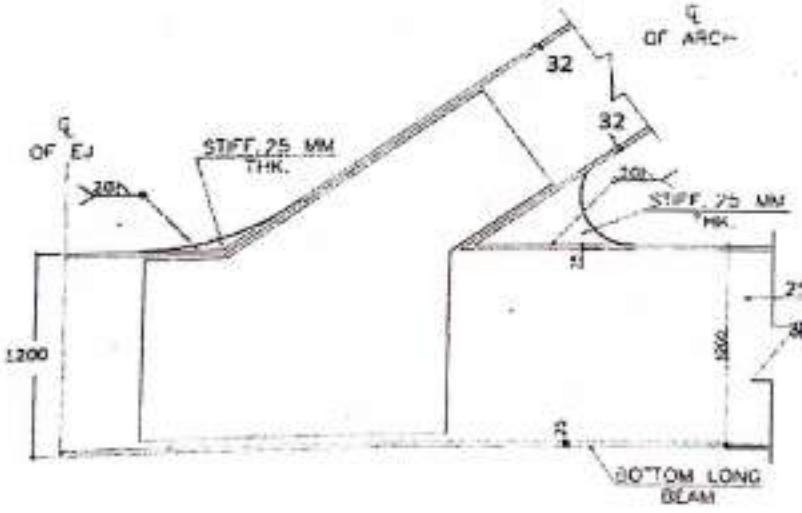


11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	NIL

Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
आरडीएसओ, लखनऊ / R.D.S.O., Lucknow

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Boral, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/27
01.	RDSO Drawing No.	:	RDSO/B-10427/4
02.	Welding Joint Description.	:	Fillet 20 mm - Fillet welding of Stiffener with Arch & Bottom Long Beam
03.	Base Metal.	:	25mmx32mm, 25mmx25mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Stiffener with Arch & Bottom Long Beam(30mmx32,30mmx25)		

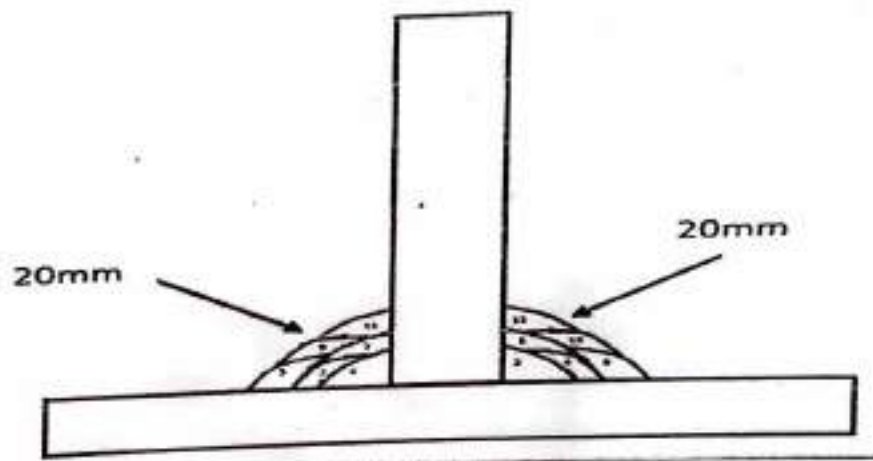


ELEVATION OF JOINT L2

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

10.2	Welding Sequence and technique	:	N.A.

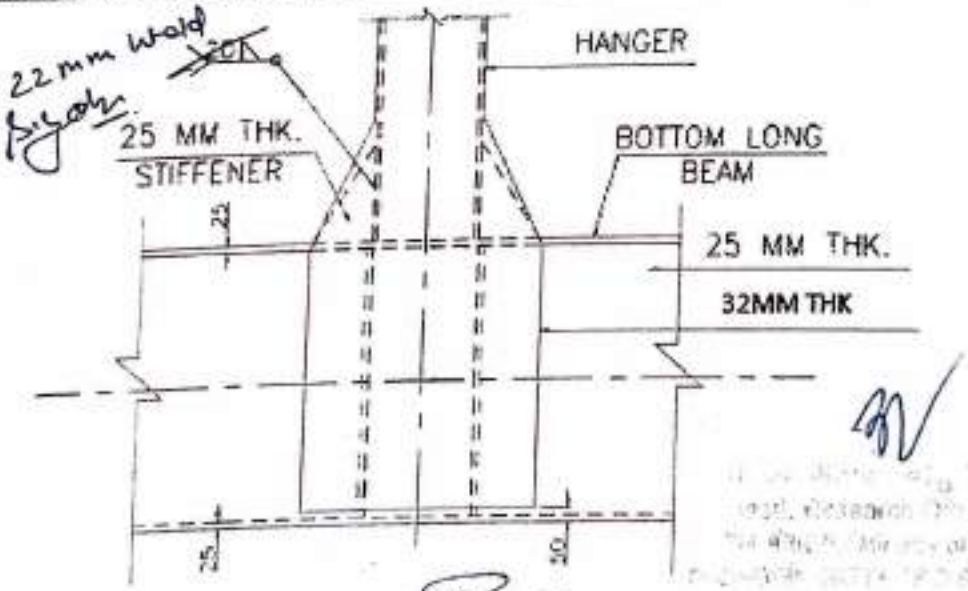


11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of JRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
	Other relevant Details	:	NIL

मुख्य कारखाना प्रबंधक / वीएडब्ल्यू
पूर्व मध्य रेल, पं० दीनदयाल उपाध्याय
Chief Workshop Manager/BW

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/28
01.	RDSO Drawing No.	:	RDSO/B-10427/5 & RDSO/B-10427/9
02.	Welding Joint Description.	:	Fillet 20 mm - Fillet welding of Stiffener with Hanger & Bottom Long Beam
03.	Base Metal.	:	25mmx25mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2020, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Stiffener with Hanger & Bottom Long Beam(25mx25mm)		

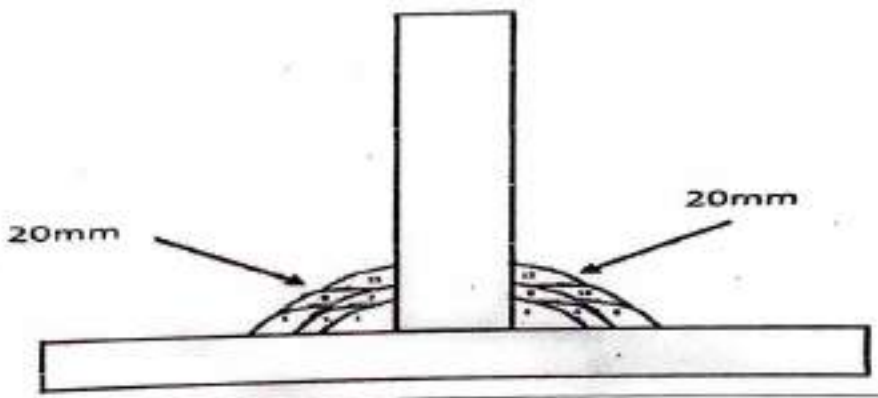


15.10.23

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

10.2	Welding Sequence and technique	:	N.A.

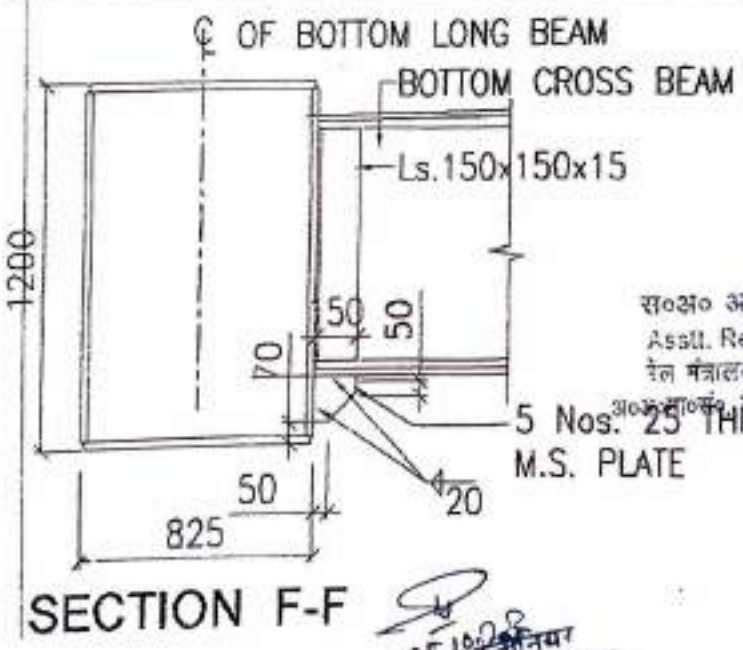


11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
	Other relevant Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/29
01.	RDSO Drawing No.	:	RDSO/B-10427/6
02.	Welding Joint Description.	:	Fillet 20mm - Fillet welding of Stiffener with Bottom Long Beam & Int. Bottom Cross Beam
03.	Base Metal.	:	25mmx25/28.r.m IS: 2062 -- 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Stiffener with Bottom Cross Beam & Bottom Long Beam (25mmx25/28mm)		

CONNECTION DETAILS - BC B1



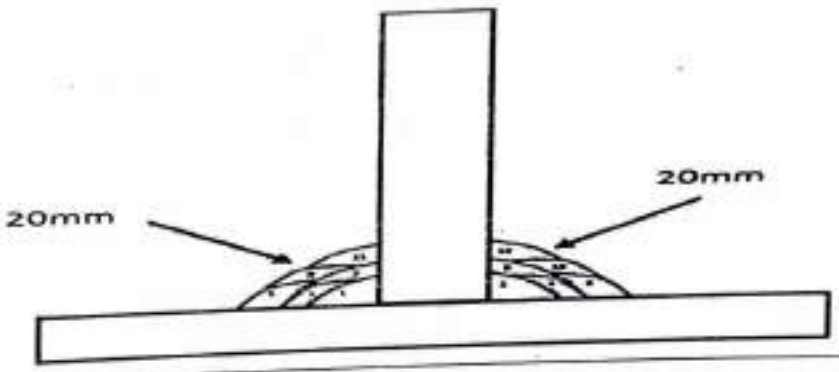
SECTION F-F

सं०अ० अधि० / धातु एवं रसा०
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
आ०अ०सं०, लखनऊ / R.D.S.O., Lucknow

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25

10.2	Welding Sequence and technique	:	N.A.



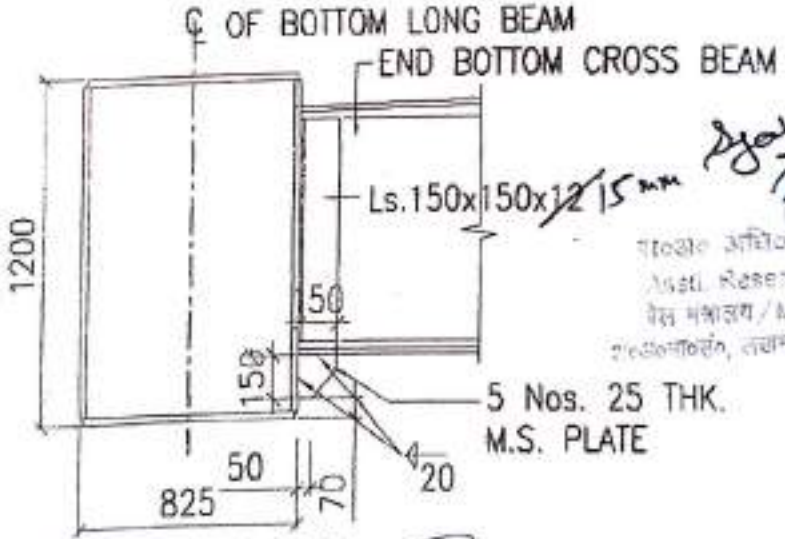
11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defects	:	Pre-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IIS M.46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/30
01.	RDSO Drawing No.	:	RDSO/B-10427/6
02.	Welding Joint Description.	:	Fillet 20 mm - Fillet welding of Stiffener with End Bottom Cross Beam with Cover Plate.
03.	Base Metal.	:	25mmx36/30mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Stiffener with End Bottom Cross Beam with Cover Plate (25mmx36/30mm)		

CONNECTION DETAILS - BC B3

(SCALE 1:25)



SECTION H-H

05-10-23

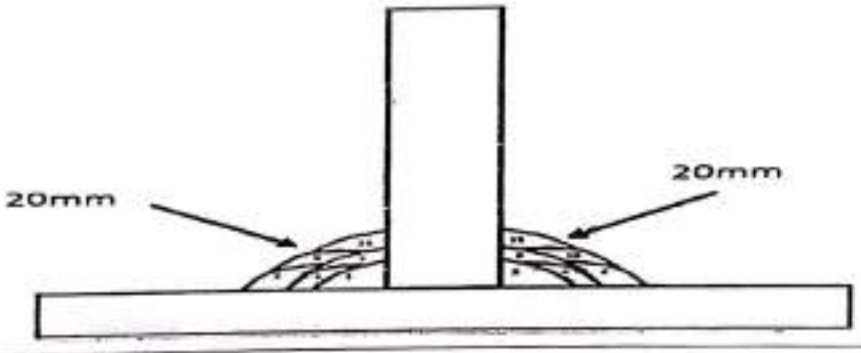
सहायक अधिकारी / अनु एवं संधान
Asstt. Research Officer (M)
रेल मंत्रालय / Ministry of Railways
इलेक्ट्रॉनिक्स, लखनऊ / R.D.S.O., Lucknow

METAL BUILDING

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding.
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	NIL

05.10.23

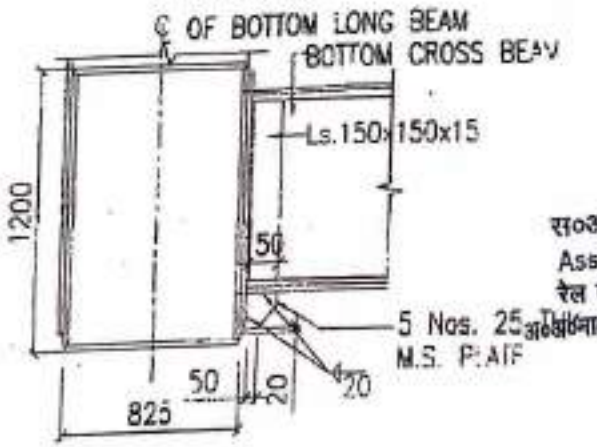
Asstt. Research Officer/M&C
Ministry of Railways
R.D.S.O., Lucknow

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/31
01.	RDSO Drawing No.	:	RDSO/B-10427/6
02.	Welding Joint Description.	:	Fillet 20 mm - Fillet welding of Stiffener with Int. Bottom Cross Beam with Hanger
03.	Base Metal.	:	25mmx28/32mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS:M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details (Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet welding of Fillet welding of Stiffener with End Bottom Cross Beam with Hanger (25mmx28/32mm)	:	

CONNECTION DETAILS - BC B2

(SCALE 1:25)



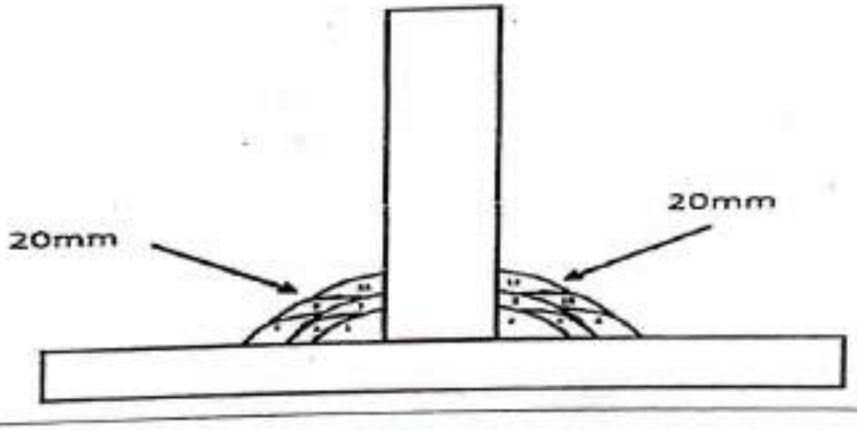
SECTION G-G

सं०अ० अधि० / धातु एवं रसा०
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
आ०अ०सं०, लखनऊ / R.D.S.O., Lucknow

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 – 25

10.2	Welding Sequence and technique	:	N.A.

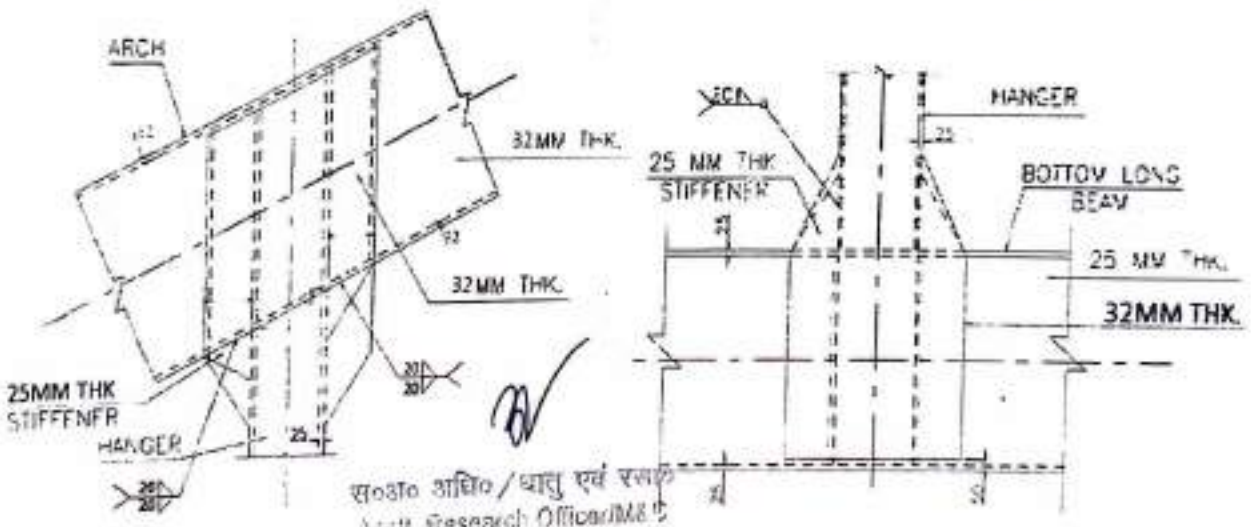


11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
	Other relevant Details	:	NIL

05.1023

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/32
01.	RDSO Drawing No.	:	RDSO/B-10427/2 & RDSO/B-10427/9
02.	Welding Joint Description.	:	Fillet 20 mm – Fillet welding of Stiffener with Arch & Hanger and Stiffener with Bottom Long Beam & Hanger.
03.	Base Metal.	:	25mmx32/25mm & 25mmx25/25mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire		
	Class	:	Class I OF IRS: M-46-2003, Flux cored MS wire.
	Dia	:	1.2 mm
	Drying Method	:	N.A.
6.2	Flux		
	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, and Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.)		
	Stiffener with Arch & Hanger and Stiffener with Bottom Long Beam & Hanger.. (25mmx32/25mm & 25mmx25/25mm)		

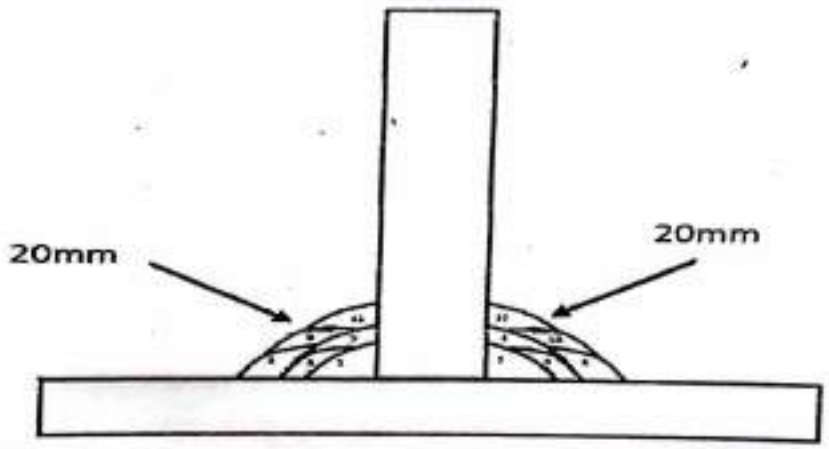


सहायक अधिकारी / धातु एवं संरचना
Asstt. Research Officer/M&S
रेल मंत्रालय / Ministry of Railways
अनुसंधान अभिकल्प एवं मानक संगठन / R.D.S.O., Lucknow.

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

10.2	Welding Sequence and technique	:	N.A.

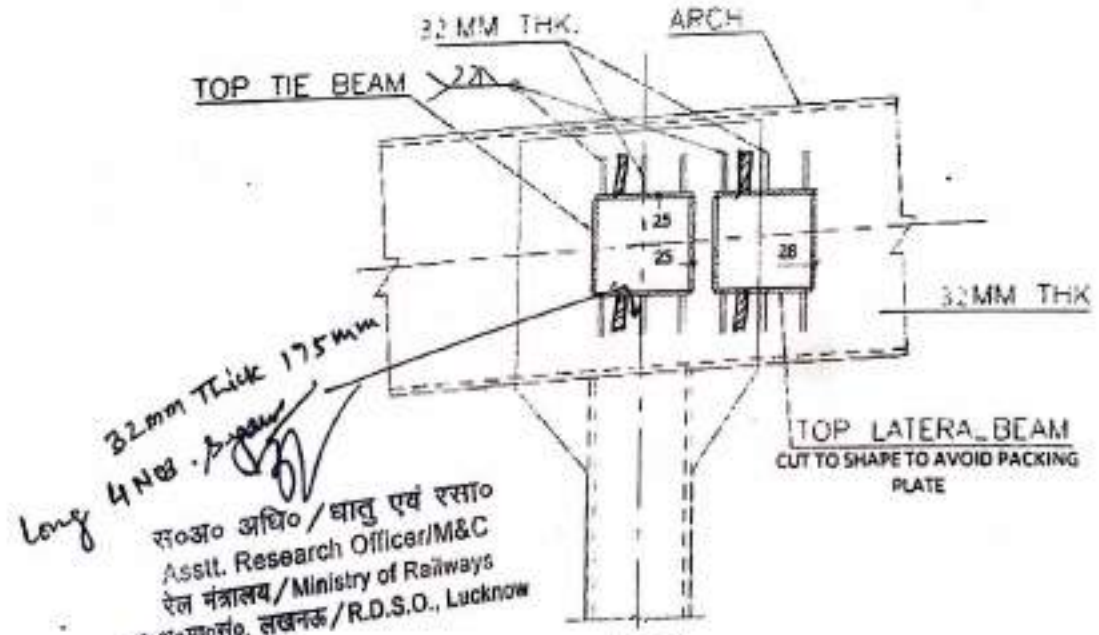


11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS,M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P.
19.	Any other relevant Details	:	Nil

सं०अ० अधि० / धातु एवं वेल्ड
Asstt. Research Officer/MDS
रेल मंत्रालय / Ministry of Railways
आर०डी०एस०ओ०, लखनऊ / R.D.S.O., Lucknow

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING BEAM

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/33
01.	RDSO Drawing No.	:	RDSO/B-10427/3
02.	Welding Joint Description.	:	Fillet 22 mm - Fillet welding of Stiffener with Top Diagonal Tie Beam& Arch and Top Diagonal Tie Beam& Hanger
03.	Base Metal.	:	32mmx28/32mm, 32mmx28/32mm IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW/2.5
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class 1 OF IRS: M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details (Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet weld of Stiffener with Top Diagonal Tie Beam& Arch/ Hanger (32mmx28/32mm, 32mmx28/32mm)	:	

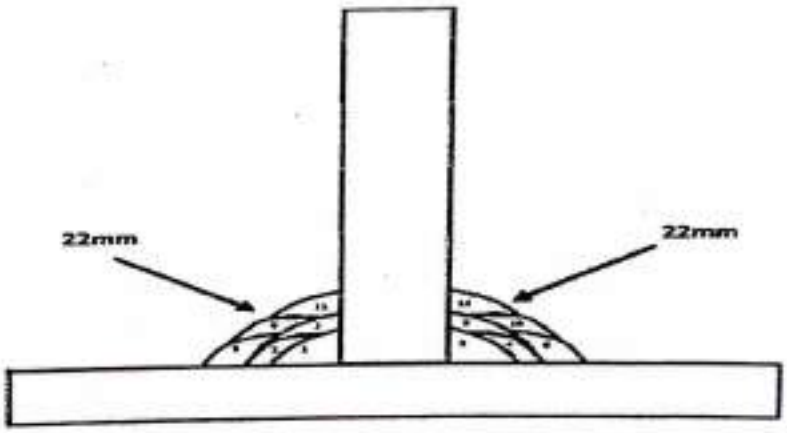


सहा॰ अधि॰/धातु एवं रसा॰
Asstt. Research Officer/M&C
रेल मंत्रालय/Ministry of Railways
आरडीएसओ, लखनऊ/R.D.S.O., Lucknow

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

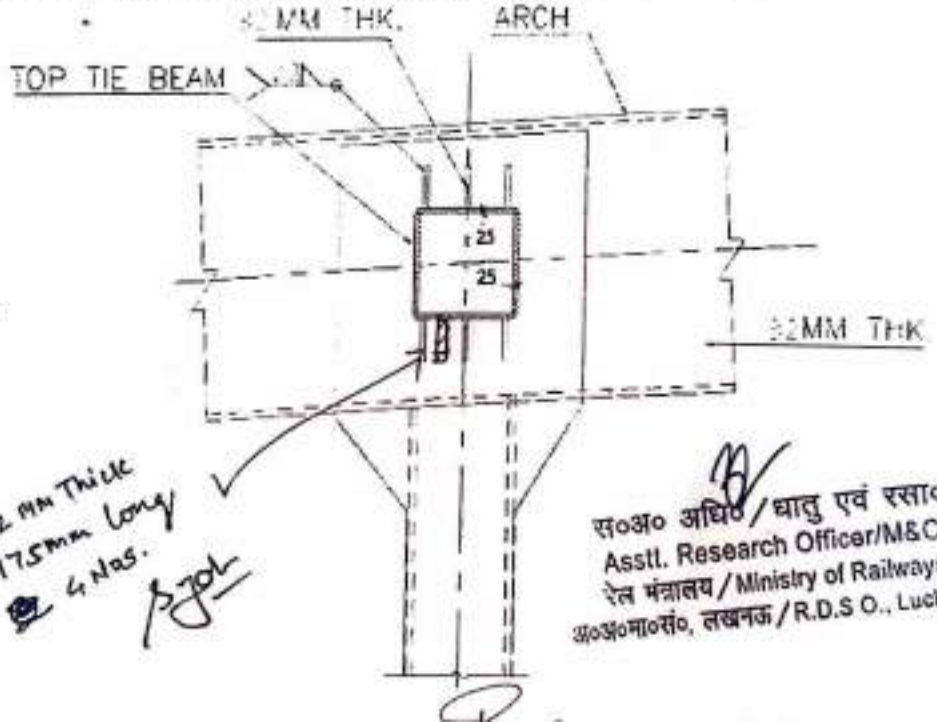
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and Inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual,& D.P
19.	Any other relevant Details	:	

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING BEAM

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/34
01.	RDSO Drawing No.	:	RDSO/B-10427/3
02.	Welding Joint Description.	:	Fillet 22 mm - Fillet welding of Stiffener with Top Tie Beam & Hanger
03.	Base Metal.	:	32mmx25/32mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire		
	Class	:	Class I OF IRS: M-46-2003, Flux cored MS wire.
	Dia	:	1.2 mm
	Drying Method	:	N.A.
6.2	Flux		
	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.)		
	Fillet weld of Stiffener with Top Tie Beam & Hanger (32mmx25/32mm)		

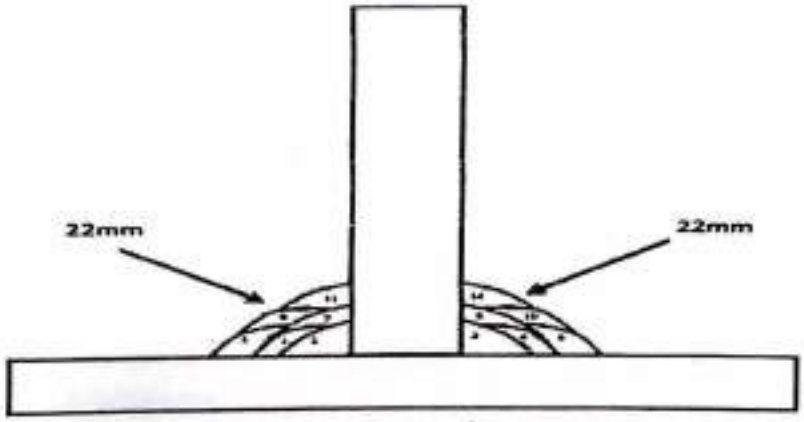


एo अo अधि० / धातु एवं रसा०
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
आ०अ०मा०सं०, लखनऊ / R.D.S O., Lucknow

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC.
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

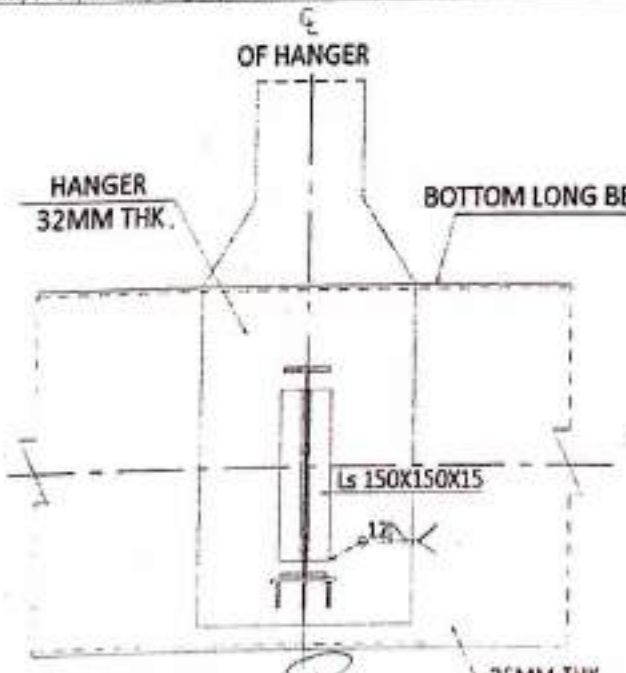
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual,& D.P
	any other relevant Details	:	

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING BEAM

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/35
01.	RDSO Drawing No.	:	RDSO/B-10427/6
02.	Welding Joint Description.	:	Fillet 12 mm - Fillet Welding of Angle with Int. Bottom Cross Beam & Bottom Long Beam and Angle with Int. Bottom Cross Beam & Hanger
03.	Base Metal.	:	Angle (150X150X12mm) X 16/25mm, Angle (150X150X12mm) X 16/32mm IS: 2062 – 2011, Gr. : E350 B0 & E250B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2003, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet Weld of Angle with Int. Bottom Cross Beam & Bottom Long Beam and Angle with Int. Bottom Cross Beam & Hanger Angle (150X150X12mm) X 16/25mm, Angle (150X150X12mm) X 16/32mm		

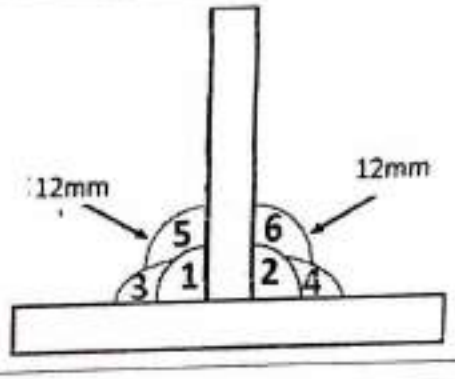


सहायक अनुसंधान अधिकारी / Asstt. Research Officer
श्रम मंत्रालय / Ministry of Labour

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

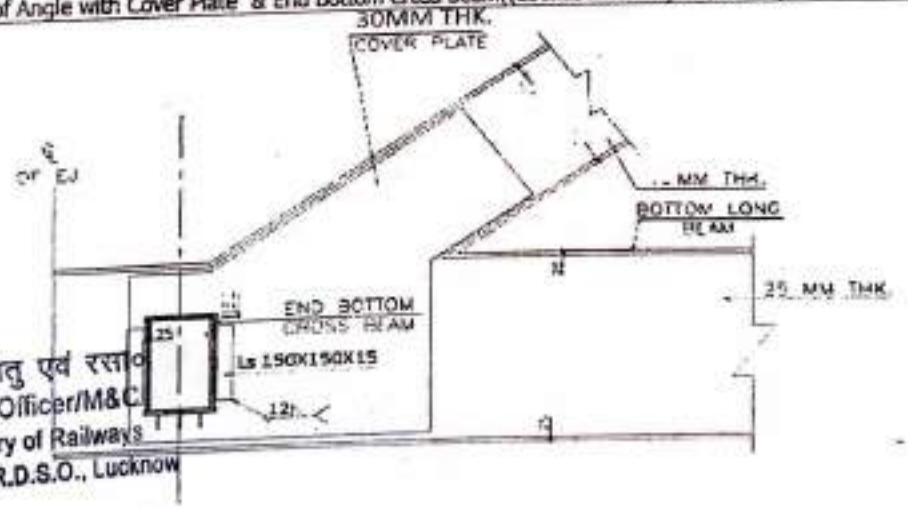
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P
19.	Any other relevant Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING BEAM

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/36
01.	RDSO Drawing No.	:	RDSO/B-10427/6
02.	Welding Joint Description.	:	Fillet 12 mm- Fillet Welding of Angle with Cover Plate & End Bottom Cross Beam
03.	Base Metal.	:	Angle 150x150x12mmx30/25mm IS: 2062 – 2011, Gr. : E350 BO & E250BR/BO
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2020, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details (Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet Weld of Angle with Cover Plate & End Bottom Cross Beam((150x150x12mm)x30/25mm)	:	



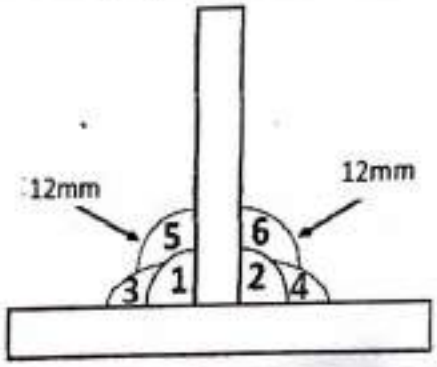
ELEVATION OF JOINT-L3

अनुसंधान अधि० / धातु एवं रसा०
Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
आ०अ०मा०सं०, लखनऊ / R.D.S.O., Lucknow

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

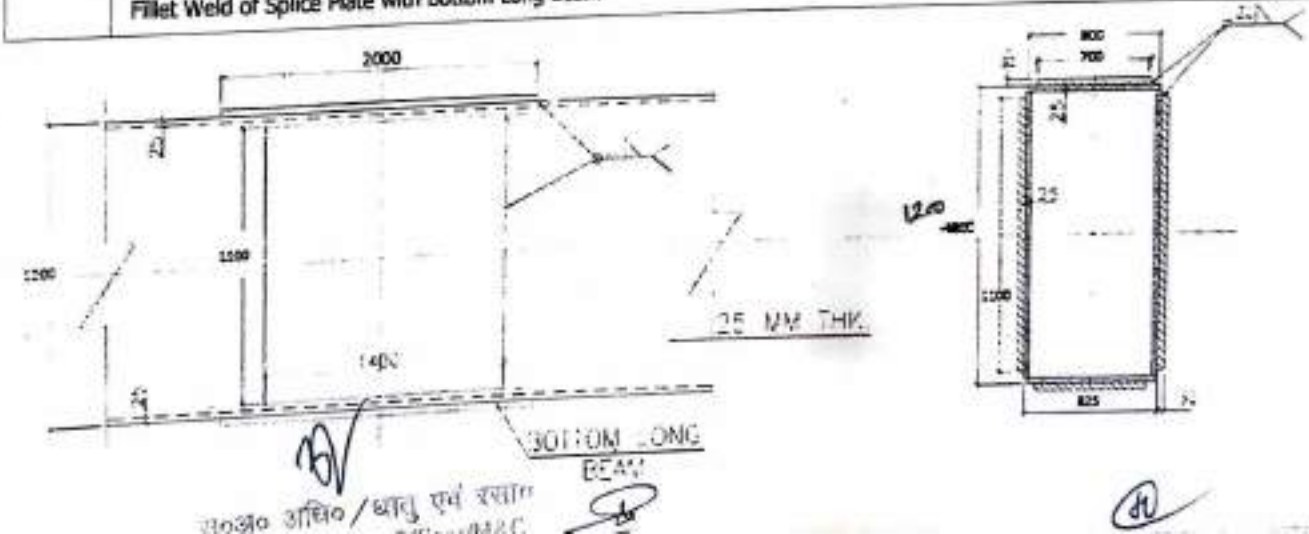
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P
19.	Any other relevant Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING BEAM

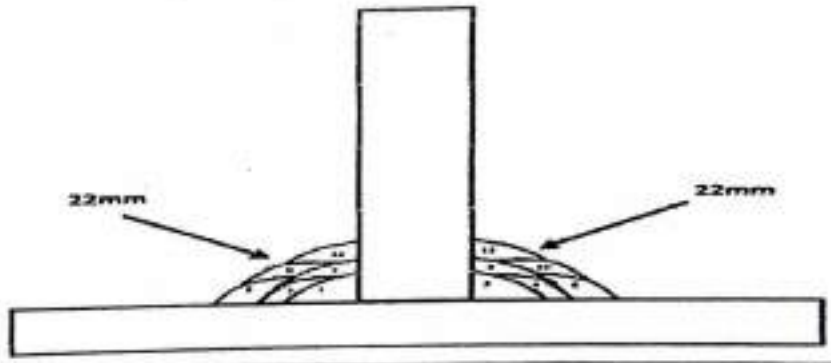
Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Boral, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/37
01.	RDSO Drawing No.	:	RDSO/B-10427/5
02.	Welding Joint Description.	:	Fillet 22 mm - Fillet Welding of Web Splice Plate with Bottom Long Beam
03.	Base Metal.	:	32mm x 25mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2020, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details (Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet Weld of Splice Plate with Bottom Long Beam	:	



7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

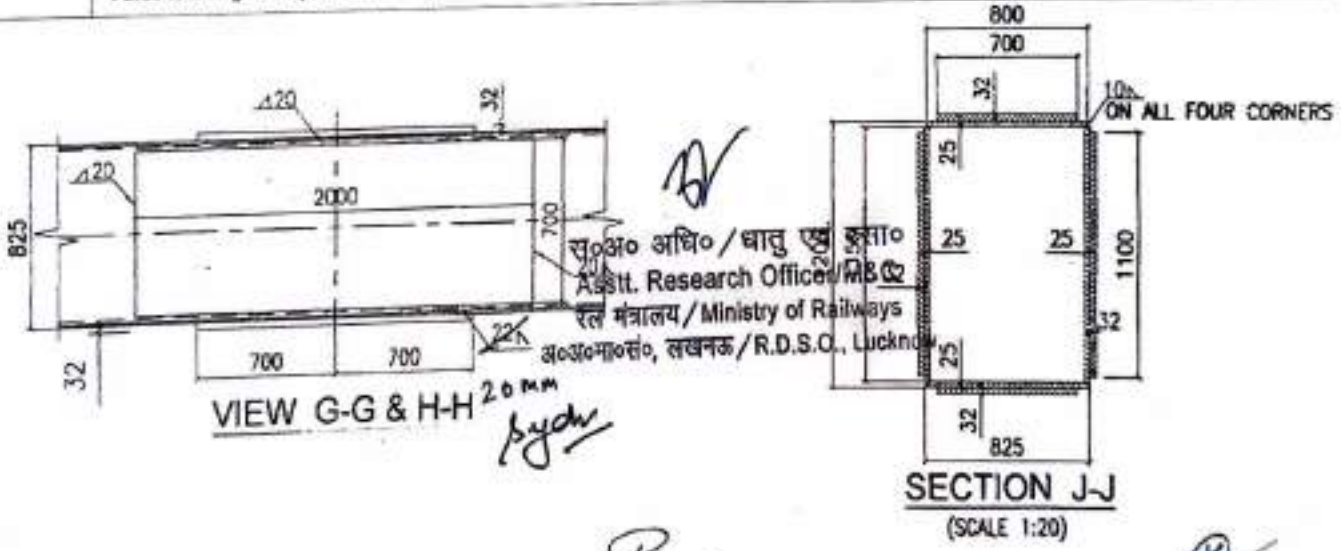
10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weldvas per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P
	Other relevant Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING BEAM

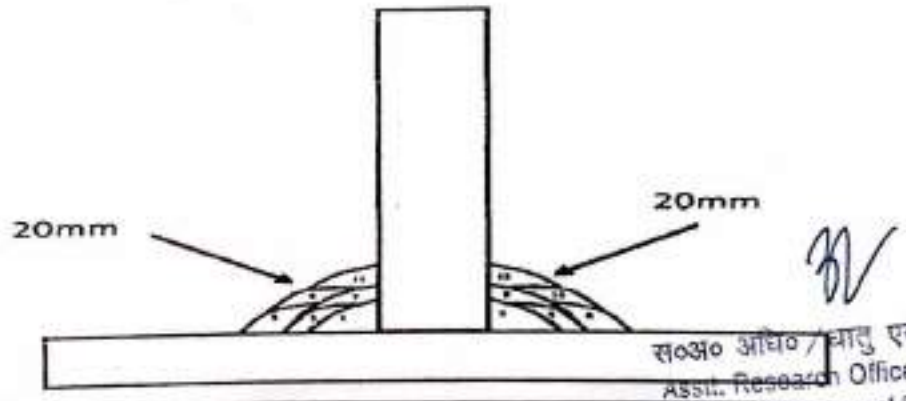
Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/38
01.	RDSO Drawing No.	:	RDSO/B-10427/5
02.	Welding Joint Description.	:	Fillet 20 mm - Fillet Welding of Top & Bottom Splice Plate with Bottom Long Beam
03.	Base Metal.	:	32mm x 25mm, IS: 2062 – 2011, Gr. : E350 BO
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class I OF IRS: M-46-2020, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet Welding of Top & Bottom Splice Plate with Bottom Long Beam		



7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

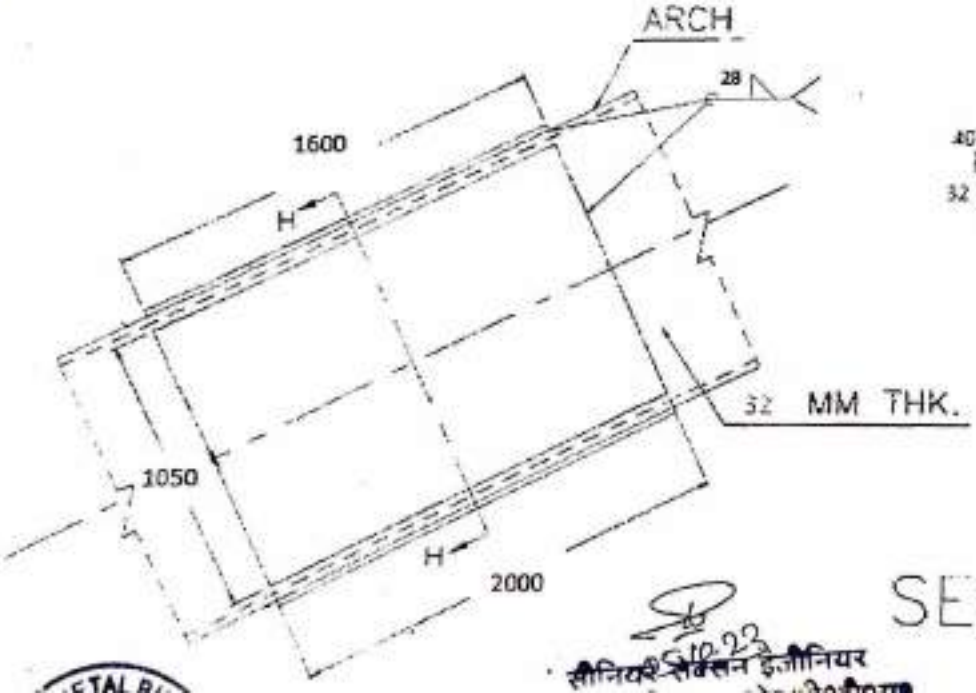
10.2	Welding Sequence and technique	:	N.A.

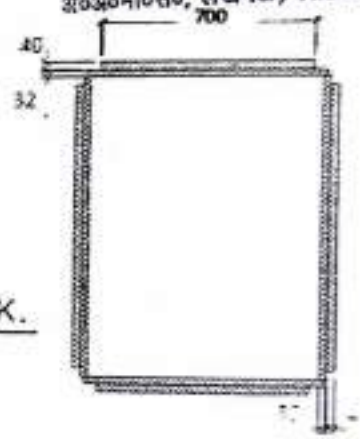


11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
	ion of Weld	:	Visual & D.P
19.	Any relevant Details	:	NIL

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING BEAM

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/39
01.	RDSO Drawing No.	:	RDSO/B-10427/2
02.	Welding Joint Description.	:	Fillet 28 mm - Fillet Welding of Splice Plate with Arch
03.	Base Metal.	:	40mm x 32mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F/4F
06.	Welding Consumable.		
6.1	Electrode/Wire		
	Class	:	Class 1 OF IRS: M-46-2003, Flux cored MS wire.
	Dia	:	1.2 mm
	Drying Method	:	N.A.
6.2	Flux		
	Class	:	N.A.
	Type	:	N.A.
	Drying Method	:	N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details	:	
	(Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.)		
	Fillet Welding of Splice Plate with Arch.		





SECTION H–H

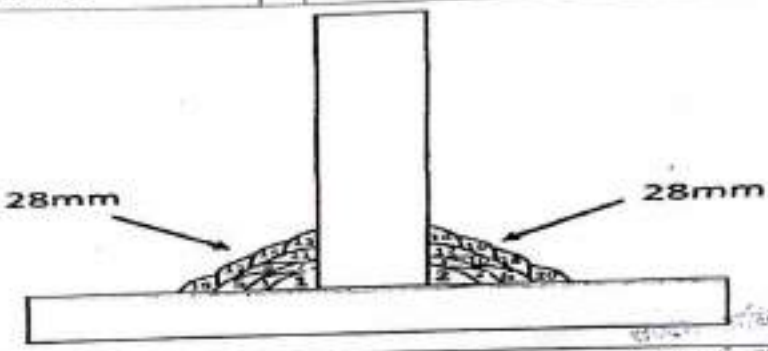
सo अ० अधि० / धातु एवं रसा०
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
आ०अ०मा०सं०, लखनऊ / R.D.S O., Lucknow

सीनियर सेक्शन इंजीनियर

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1,2 (Root pass)	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
3,4	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
5,6	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
7,8	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
9,10	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
11,12	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
13,14	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
15,16	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
17,18	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25
19,20	1.2 mm	150 – 250	24 – 30	Controlled by current	N.A.	15	15 - 25

10.2	Welding Sequence and technique	:	N.A.

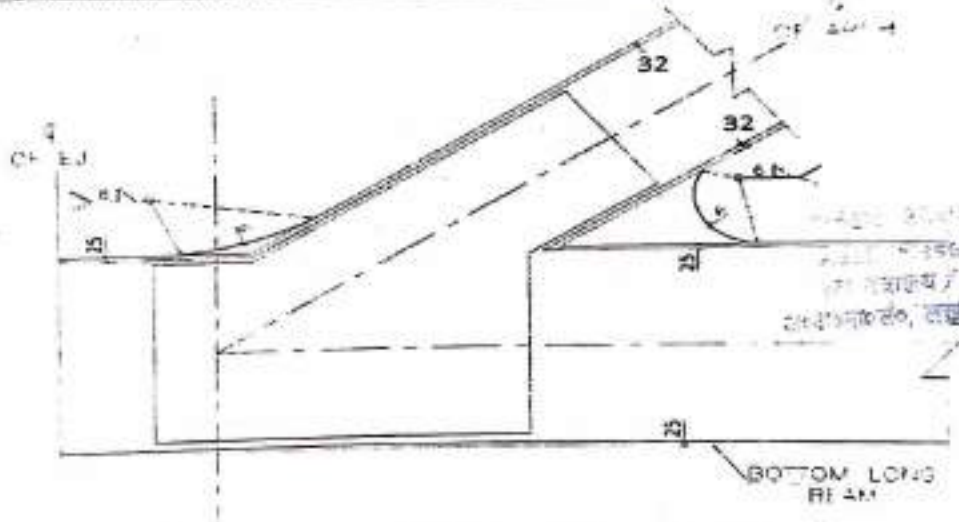


11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	Yes, in case of multi layer. By brush cleaning and grinding
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P
19.	Any other relevant Details	:	05.10.23

मुख्य कारखाना प्रबंधक / डीडीयूए
पूर्व मध्य रेल, पं० दीनदयाल उपाध्याय
Chief Workshop Manager/DDW
पूर्व मध्य रेल, पं० दीनदयाल उपाध्याय

WELDING PROCEDURE SPECIFICATION SHEET FOR 60 M CLEAR SPAN BOW STRING BEAM

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Boral, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/40
01.	RDSO Drawing No.	:	RDSO/B-10427/4
02.	Welding Joint Description.	:	Fillet 6 mm - Fillet Welding of 6 mm cover plate with Arch and Bottom Long Beam
03.	Base Metal.	:	6 mm X 32/25mm, IS: 2062 – 2011, Gr. : E350 B0
04.	Welding Process	:	FCAW
05.	Welding Position.	:	2F/3F
06.	Welding Consumable.		
6.1	Electrode/Wire Class Dia Drying Method	: : :	Class 1 OF IRS: M-46-2000, Flux cored MS wire. 1.2 mm N.A.
6.2	Flux Class Type Drying Method	: : :	N.A. N.A. N.A.
6.3	Shielding Gas	:	CO2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint and Rust etc., which may affect weld quality.
7.1	Joint design Details (Sketch showing arrangements of parts, weld bead details, weld passes & their sequence etc.) Fillet Welding of 6 mm cover plate with Arch and Bottom Long Beam.(6MMX32MM & 6MMX25MM)	:	

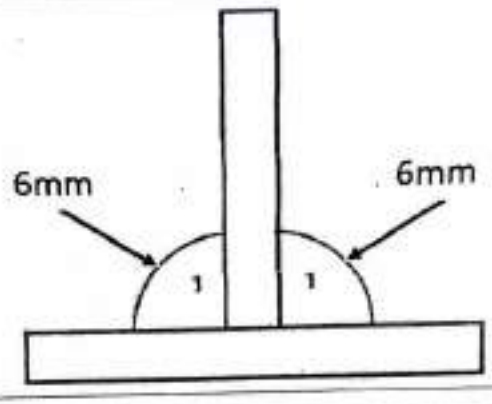


ELEVATION OF JOINT

7.2	Joint preparation	:	As Per IS: 10178 – 1995, IS: 7215 & Welded Bridge Code. Fillet Joint.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	REVERSE
09.	Welder qualification	:	As per IS: 7310/7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

Weld Sequence No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1(Root pass)	1.2 mm	150 – 250	22 – 28	Controlled by current	N.A.	15	15 – 25

10.2	Welding Sequence and technique	:	N.A.



11.	Provision of run-on / run-off tabs	:	N. A.
12.	Cleaning of weld bead before laying next weld bead	:	N.A.
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-258°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By re-welding after complete removal of defective weld & rectify the weld as per Cl.32.2 of IS 9595-96, using Flux Cored Wire (Class I of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & D.P
19.	Any other relevant Details	:	NIL

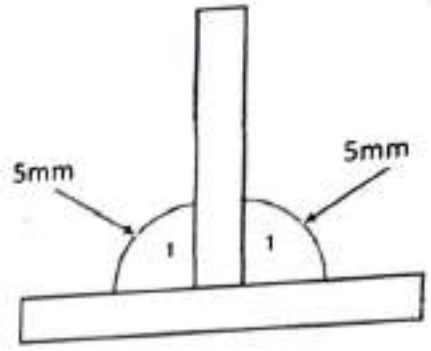
Asstt. Research Officer/NC

WELDING PROCEDURE SPECIFICATION SHEET FOR 72.0 m. CLEAR SPAN BOW STRING GIRDER

Name and address of Fabricator		:	M/s. Struc-Rite Metal Building Systems, Unit-II, Borai, Durg-491001.
Welding Procedure specification No.		:	SRMBS/RKSCPL/SITE/WPS/60M/41
01.	RDSO Drawing No.	:	RDSO/B-10427 Series
02.	Welding Joint Description.	:	Fillet 5 mm - Tack Weld
03.	Base Metal.	:	IS: 2062 – 2011 E350/E250
04.	Welding Process	:	FCAW (Flux core Arc Welding)
05.	Welding Position.	:	Horizontal / Vertical
06.	Welding Consumable.		
6.1	Electrode/Wire Class	:	Class I OF IRS: M-46-~~2005~~ 2020, Flux cored MS wire.
	Dia	:	1.2 mm
	Drying Method		N.A.
6.2	Flux		
	Class	:	N.A.
	Type	:	N.A.
	Drying temperature	:	N.A.
6.3	Shielding Gas	:	CO_2
07.	Base Metal Preparation	:	Fusion Faces and adjacent surfaces are cleaned and made free from Cracks, Notches, Mill scale, Grease, Paint, Rust etc., which may affected weld quality.
7.1	Joint design Details	:	N.A.
	Length of Tack Weld 50 mm Distance between tack Weld 300 mm		
7.2	Joint preparation	:	As Per IS: 4353 – 1995, IS: 7215 & Welded Bridge Code.
08.	Welding Current	:	
	Type	:	DC
	Polarity	:	Reverse
09.	Welder qualification	:	As per IS: 7310 /7307 (Part-I) – 2019
10.	Welding Parameters and technique	:	
10.1	Welding Parameters	:	

सहा० अनु० अधि० / धातु एवं रसा०
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways
अ०अ०मा०सं०, लखनऊ / R.D.S.O., Lucknow

Weld Pass No.	Electrodes wire dia. (mm)	Current (Amps)	Arc Voltage (Volt)	Wire Feed Speed (m/min)	Travel Speed (m/min)	Electrodes Stick out (mm)	Gas Flow (l/min.)
1	1.2	150 – 220	20 – 26	3.5 – 4.0	N.A.	13 – 16	16 - 18

10.2	Welding Pass and technique	:	N.A.
Length of Tack Weld 50 mm Distance between tack Weld 300 mm			

11.	Provision of run-on / run-off tabs	:	N.A.
12.	Cleaning of weld bead before laying next weld bead	:	N.A.
13.	Root preparation before welding other side of groove weld	:	N.A.
14.	Preheating and inter pass temperature	:	Preheat Temp.-Min.150°C & Interpass Temp.-250°C Max.
15.	Peening	:	N.A.
16.	Post Weld treatment	:	N.A.
17.	Rectification of weld defect	:	By grinding of the defective weld & rectify the weld as per cl 32.2 of IS 9595-96, using Flux Cored Wire (Class 1 of IRS M 46) after conducting DP Test.
18.	Inspection of Weld	:	Visual & DPT
19.	Any other relevant Details	:	Tack Weld of all fit up component

सं॰अ॰ अधि॰ धातु एवं रसा॰
Asstt. Research Officer/M&C
रेल मंत्रालय / Ministry of Railways

05.10.23