

INDIAN RAILWAYS**CRF CHECKSHEETS****FOR****BOGIE RAIL WAGON (91.6 Tonnes)****TYPE – BRN 22.9 WITH BMBS****BROAD GAUGE****(1676 mm)**

S.No.	Month & Year of issue	Revision / Amendment	Page No.	Reason for Amendment
1.	February 2012	-	-	First issue
2.	January 2018	Amendment-1	32	Conversion of Fixed End Arrangement into Foldable Bulkhead

ISSUED BY

**RESEARCH DESIGNS AND STANDARDS ORGANISATION
MINISTRY OF RAILWAYS
LUCKNOW-226 011**

February 2012

These check sheets do not detail all the dimensions or technical requirements of respective wagon assemblies / components. These check sheets are issued only for General Guidance & assistance of inspecting officials. Notwithstanding the above, the inspecting officials are advised to refer to relevant drawings and / or relevant specifications to confirm conformity to the specified dimensions and technical details.

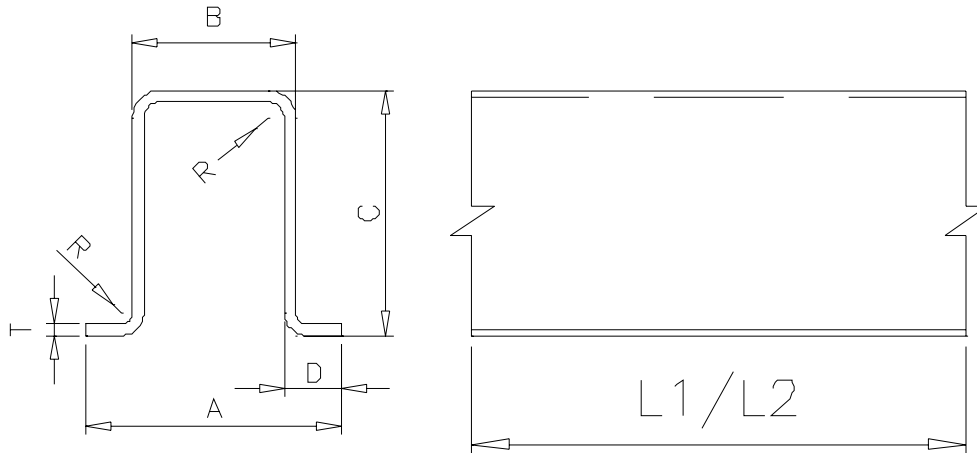
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Note:

1. The check sheets do not detail all the dimensions or technical requirements of respective wagon assemblies/components. These check sheets are issued only for General Guidance& assistance of inspecting officials. Notwithstanding the above, the inspecting officials are advised to refer to relevant drawings and/or relevant specification to confirm conformity to the specified dimensions and technical details.
2. In check sheets wherever it is indicated that two dimensions are to be measured, it means measurement of that dimension at two end locations of the component.

BUFFING STRUT



Ref: Drawing No. WD-10072-S-01 Item-1a& WD-09053-S-05 Item-13

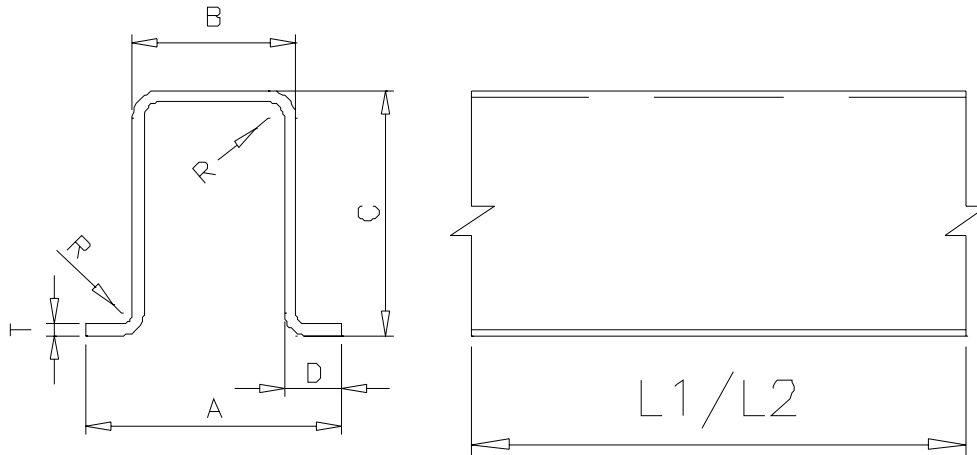
BUFFING STRUT NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	2085, +3, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STRINGER (OUTER)



Ref: Drawing No. WD-10072-S-01 Item-1b& WD-09053-S-05 Item-4

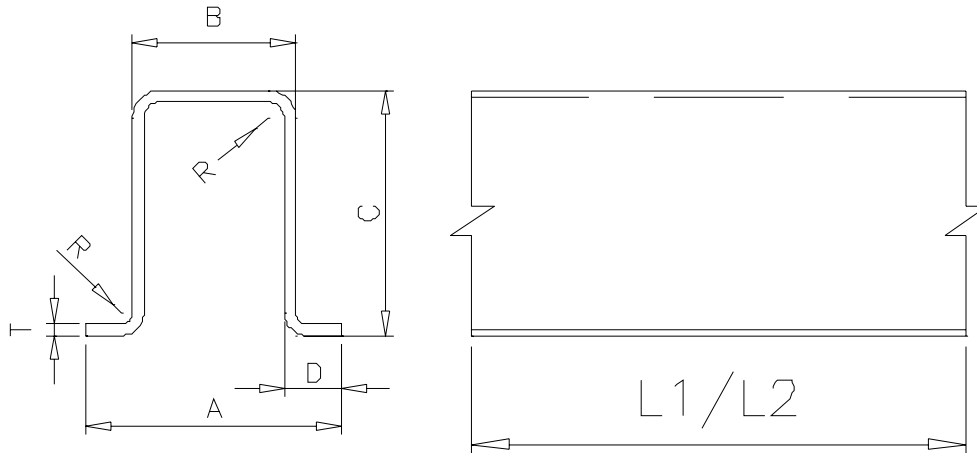
STRINGER (OUTER) NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	2054, +3, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STRINGER(INNER)



Ref: Drawing No. WD-10072-S-01 Item-1c& WD-09053-S-05 Item-24

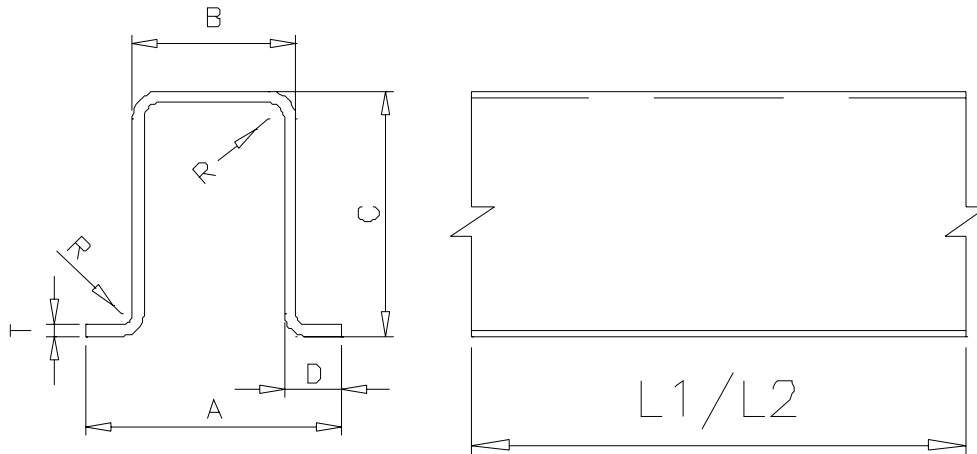
STRINGER(INNER) NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	1397, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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CROSS STRINGER



Ref: Drawing No. WD-10072-S-01 Item-1d& WD-09053-S-05 Item-18

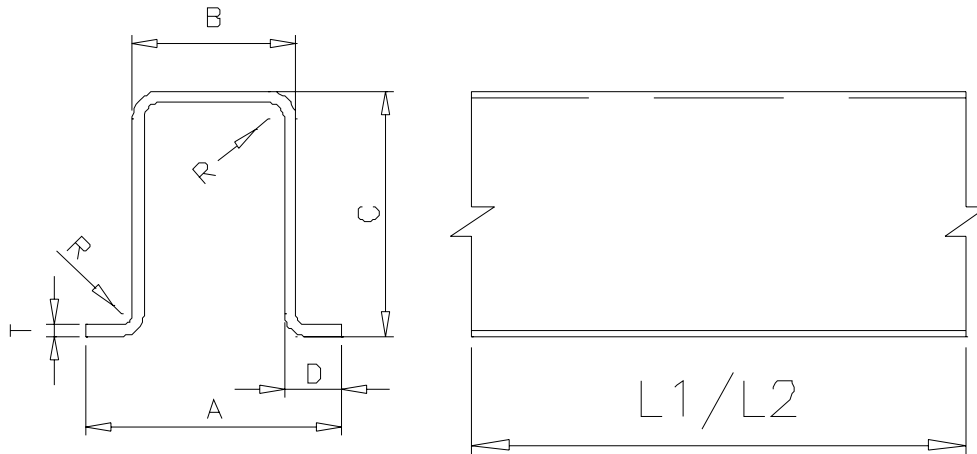
CROSS STRINGER NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	1125, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STRINGER



Ref: Drawing No. WD-10072-S-01 Item-1e& WD-09053-S-05 Item-17

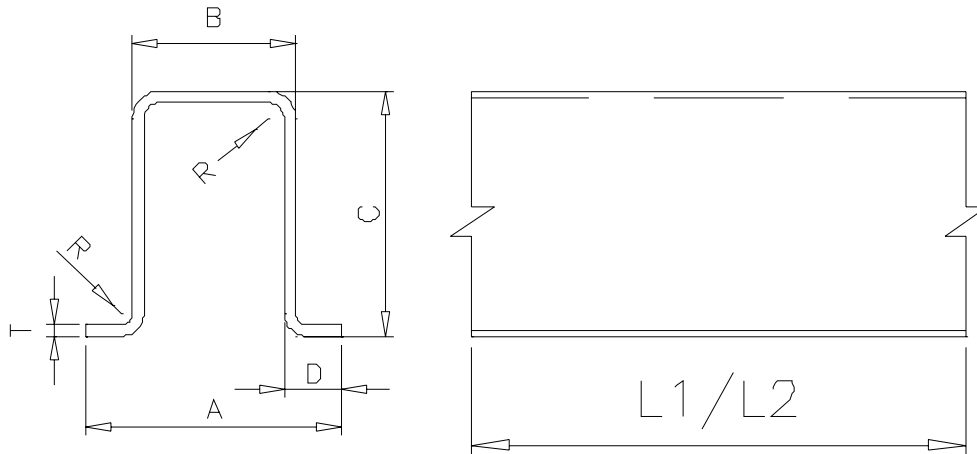
STRINGER NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	1102, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STRINGER(INNER)



Ref: Drawing No. WD-10072-S-01 Item-1f& WD-09053-S-05 Item-23

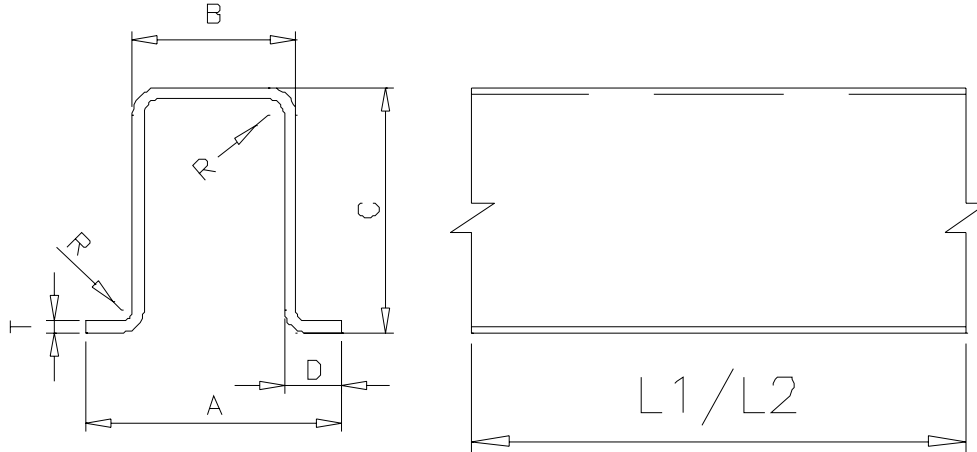
STRINGER(INNER) NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	711, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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HAND WHEEL SPINDLE SUPPORTING STRINGER



Ref: Drawing No. WD-10072-S-01 Item-1f& WD-09053-S-05 Item-5

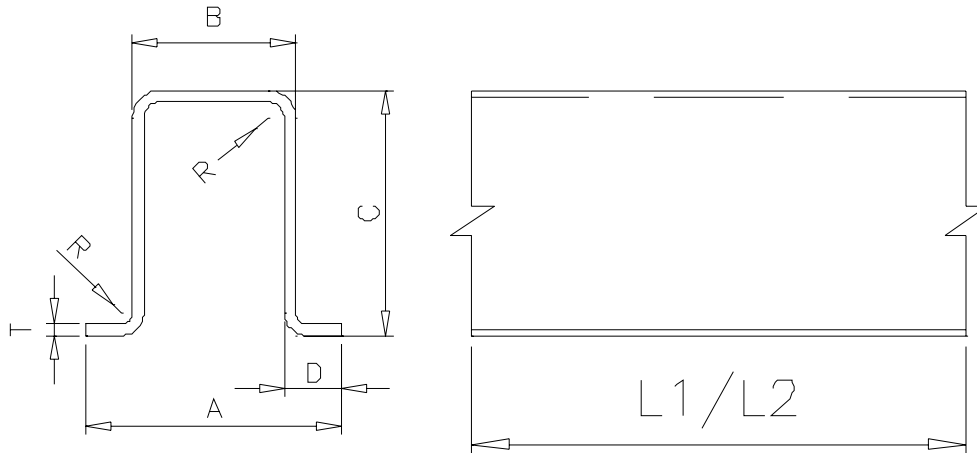
HAND WHEEL SPINDLE SUPPORTING STRINGER NO:				Date:		Remarks
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	711, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STRINGER LONG (MIDDLE)



Ref: Drawing No. WD-10072-S-01 Item-1g& WD-09053-S-05 Item-7

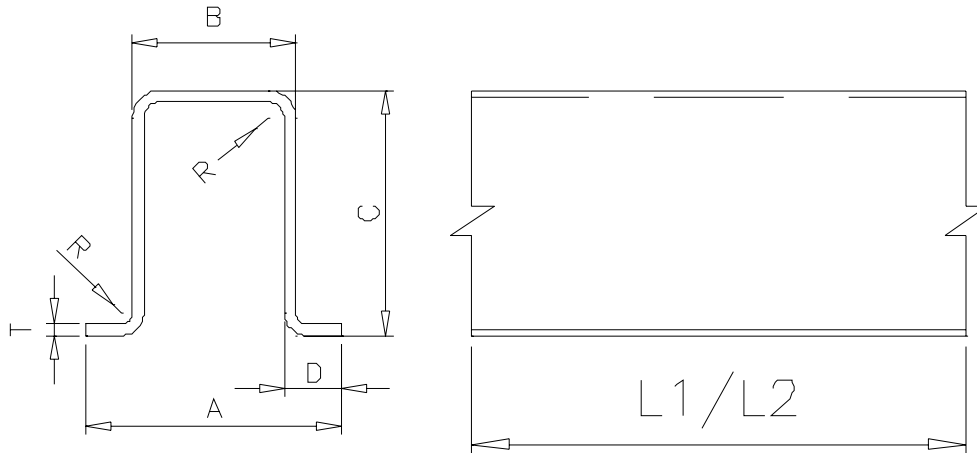
STRINGER LONG (MIDDLE) NO:				Date:		Remarks
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	1522, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STIFFENING CROSS MEMBER(INNER)



Ref: Drawing No. WD-10072-S-01 Item-1h& WD-09053-S-05 Item-9

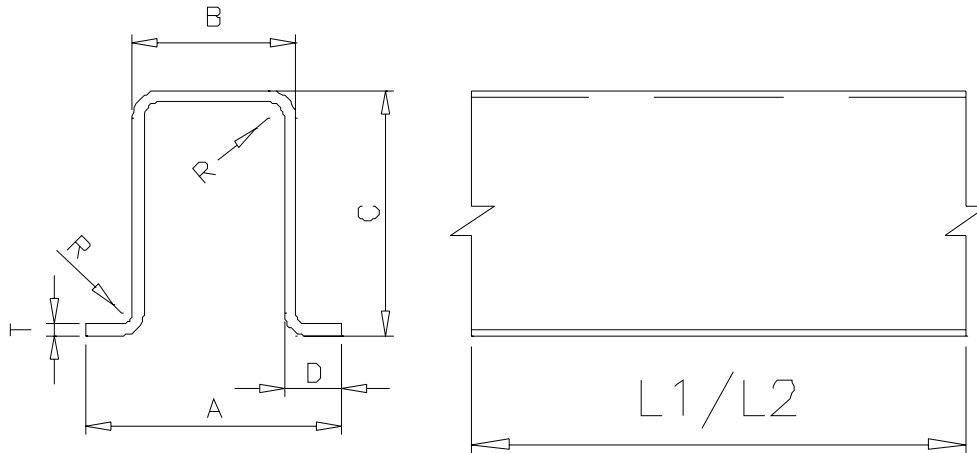
STIFFENING CROSS MEMBER(INNER) NO:				Date:		Remarks
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	672, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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CENTRAL GIRDER CROSS STRINGER



Ref: Drawing No. WD-10072-S-01 Item-1i & WD-09053-S-05 Item-6

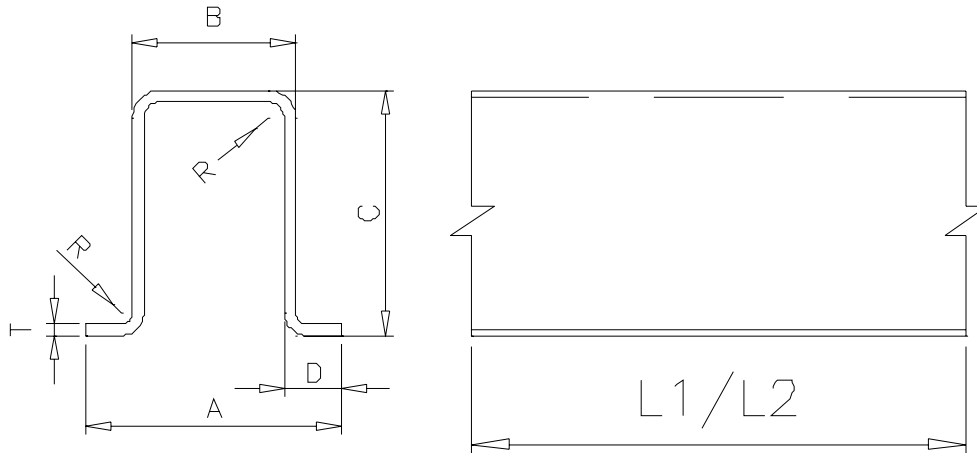
CENTRAL GIRDER CROSS STRINGER NO:				Date:		Remarks
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	634, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STIFFENING CROSS MEMBER(OUTER)



Ref: Drawing No. WD-10072-S-01 Item-1j& WD-09053-S-05 Item-8

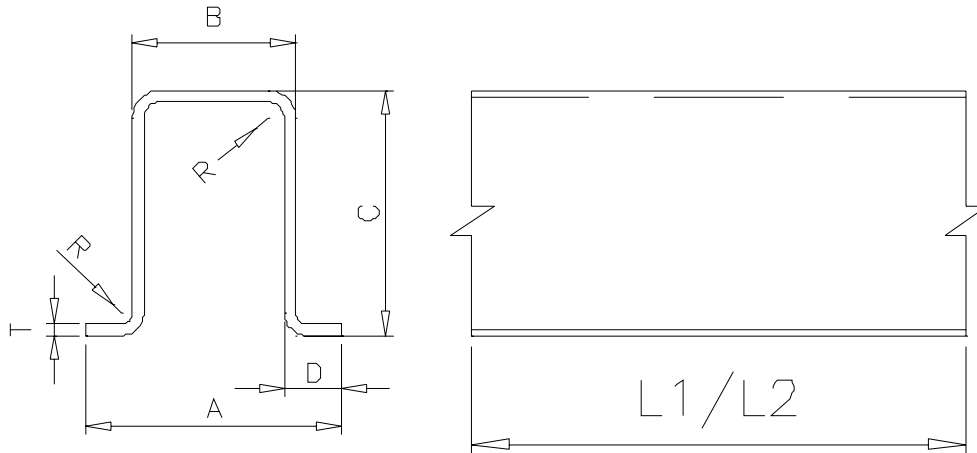
STIFFENING CROSS MEMBER(OUTER) NO:				Date:		Remarks
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	512.5, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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CROSS STRINGER(OUTER)



Ref: Drawing No. WD-10072-S-01 Item-1j& WD-09053-S-05 Item-10

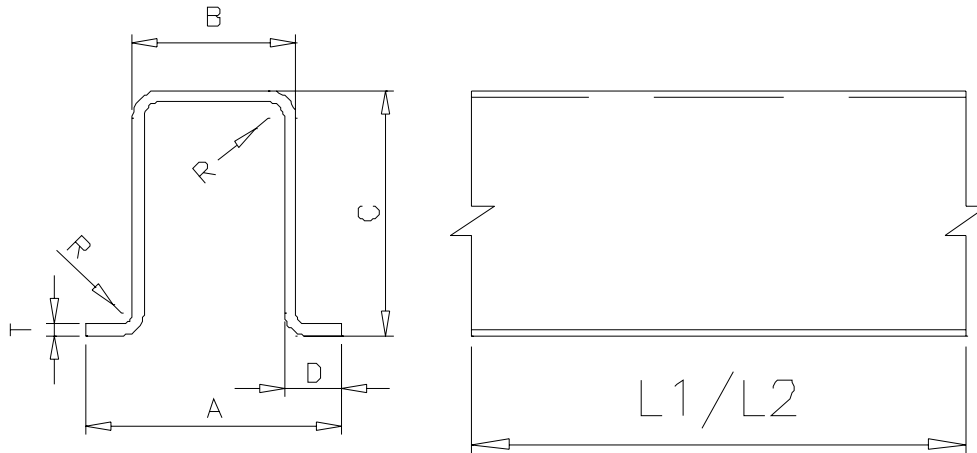
CROSS STRINGER(OUTER) NO:				Date:		Remarks
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	512.5, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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CROSS STRINGER(INNER)



Ref: Drawing No. WD-10072-S-01 Item-1j& WD-09053-S-05 Item-12

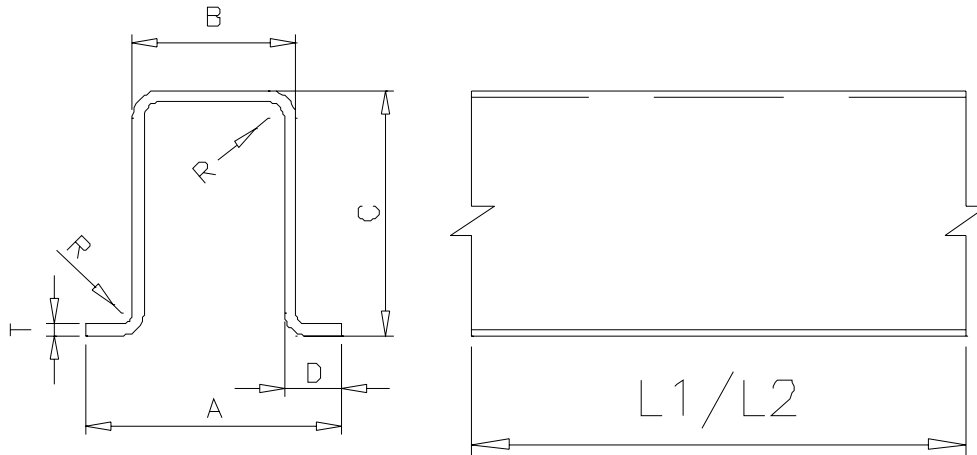
CROSS STRINGER(INNER) NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	512.5, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STRINGER(CENTER)



. Ref: Drawing No. WD-10072-S-01 Item-1k& WD-09053-S-05 Item-14

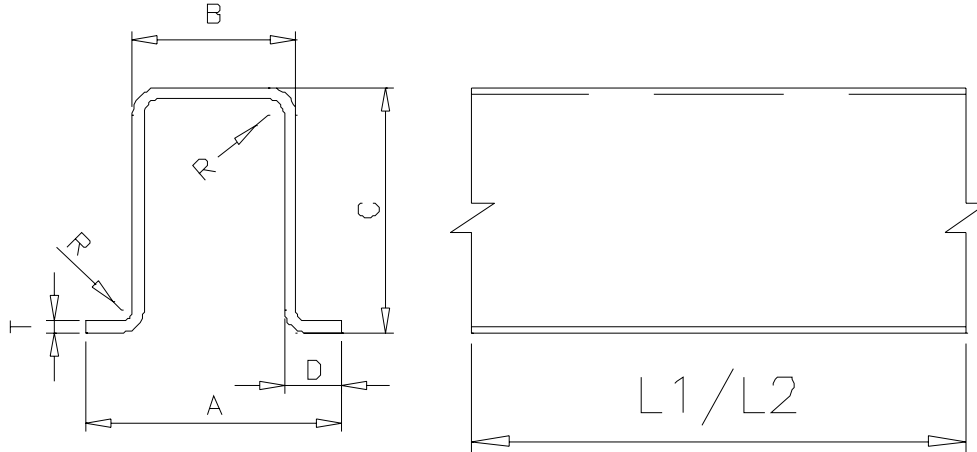
STRINGER(CENTER) NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	501, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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BOLSTER STIFFENER



. Ref: Drawing No. WD-10072-S-01 Item-11 & WD-09053-S-05 Item-21

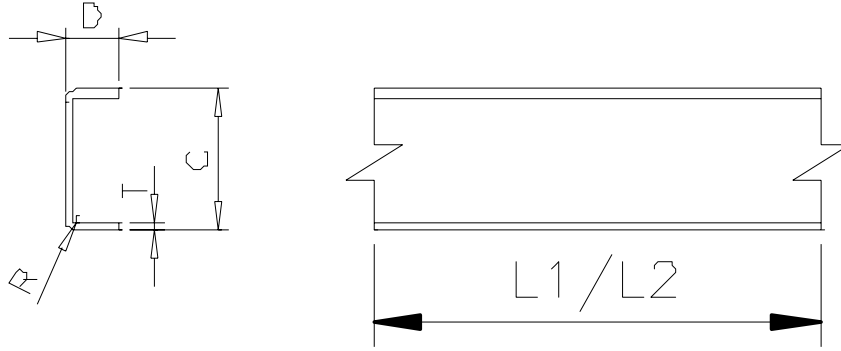
BOLSTER STIFFENER NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Top width	A	156, +2,-2			
ii.	Bottom width	B	100,+1,-1			
iii.	Length Overall	L1/L2	362, +1, -1			
iv.	Height Overall	C	150, +1.5, -1.5			
v.	Flanges	D	35+/-2			
vi.	Thickness	T	7,+0.35,-0.35			
vii.	Radius	R	14+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STRINGER FOR SUSPENSION BRACKET(SHORT)



Ref: Drawing No. WD-10072-S-01 Item-2a & WD-09053-S-05 Item-15

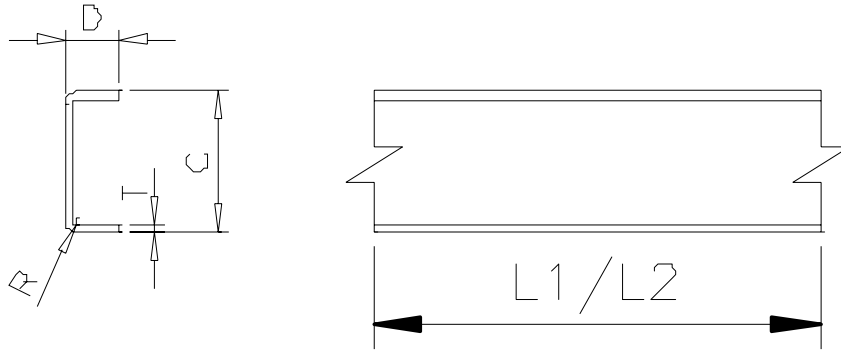
STRINGER FOR SUSPENSION BRACKET NO:				Date:		Remarks
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	784, +1, -1			
ii.	Height Overall	C	75, +1, -1			
iii.	Flanges	D	30+/-1			
iv.	Thickness	T	4,+0.2,-0.2			
v.	Radius	R	8+/-1.5			
vi.	Angle	-	+/-1°			
vii.	Waviness	-	2 max.			
viii.	Bow	-	1 in 600			
ix.	Camber	-	1 in 600			
x.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STRINGER FOR SUSPENSION BRACKET(LONG)



Ref: Drawing No. WD-10072-S-01 Item-2b & WD-09053-S-05 Item-15

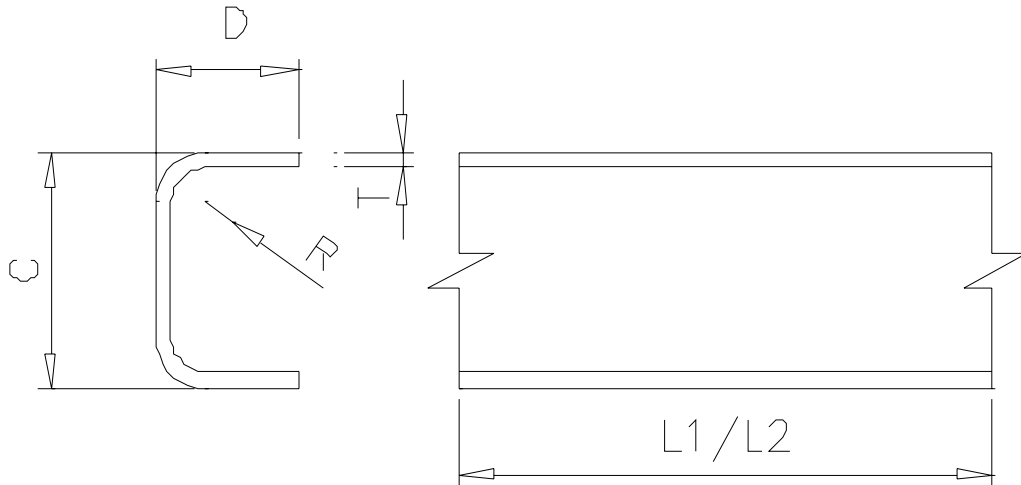
STRINGER FOR SUSPENSION BRACKET NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	789, +1, -1			
ii.	Height Overall	C	75, +1, -1			
iii.	Flanges	D	30+/-1			
iv.	Thickness	T	4,+0.2,-0.2			
v.	Radius	R	8+/-1.5			
vi.	Angle	-	+/-1°			
vii.	Waviness	-	2 max.			
viii.	Bow	-	1 in 600			
ix.	Camber	-	1 in 600			
x.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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SUPPORTING CHANNEL



Ref: Drawing No. WD-10072-S-01 Item-3& WD-09053-S-05 Item-3

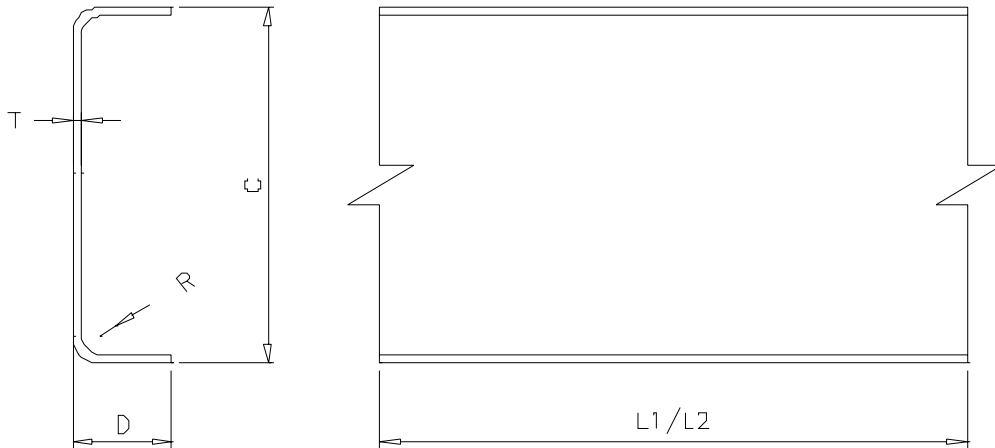
SUPPORTING CHANNEL NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	1125, +1, -1			
ii.	Height Overall	C	100, +1, -1			
iii.	Flanges	D	60+/-1.5			
iv.	Thickness	T	5,+0.25,-0.25			
v.	Radius	R	10+/-1.5			
vi.	Angle	-	+/-1°			
vii.	Waviness	-	2 max.			
viii.	Bow	-	1 in 600			
ix.	Camber	-	1 in 600			
x.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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SOLE BAR



Ref: Drawing No. WD-10072-S-01 Item-4& WD-09053-S-07 Item-1

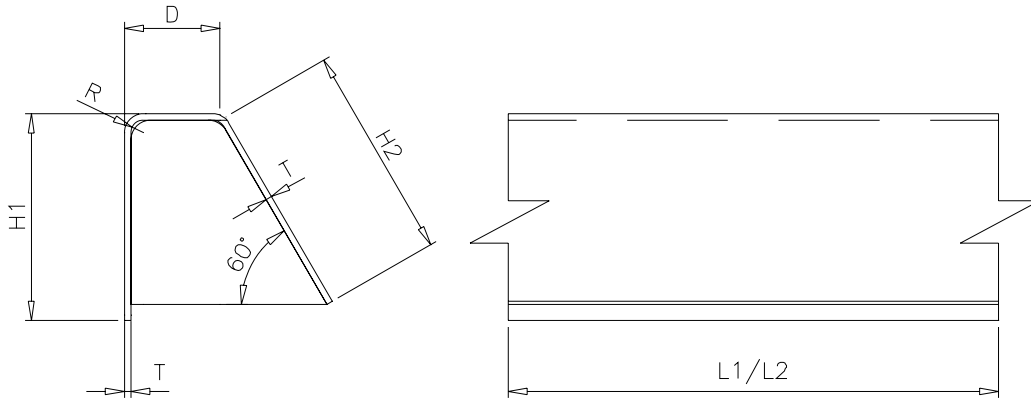
SOLE BAR NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	13716, +4, -2			
ii.	Height Overall	C	270, +1.5, -1.5			
iii.	Flanges	D	75+/-1.5			
iv.	Thickness	T	7,+0.35,-0.35			
v.	Radius	R	14+/-1.5			
vi.	Angle	-	+/-1°			
vii.	Waviness	-	2 max.			
viii.	Bow	-	1 in 600			
ix.	Camber	-	1 in 600			
x.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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SIDE RAIL



Ref: Drawing No. WD-10072-S-01 Item-5& WD-09053-S-07 Item-2

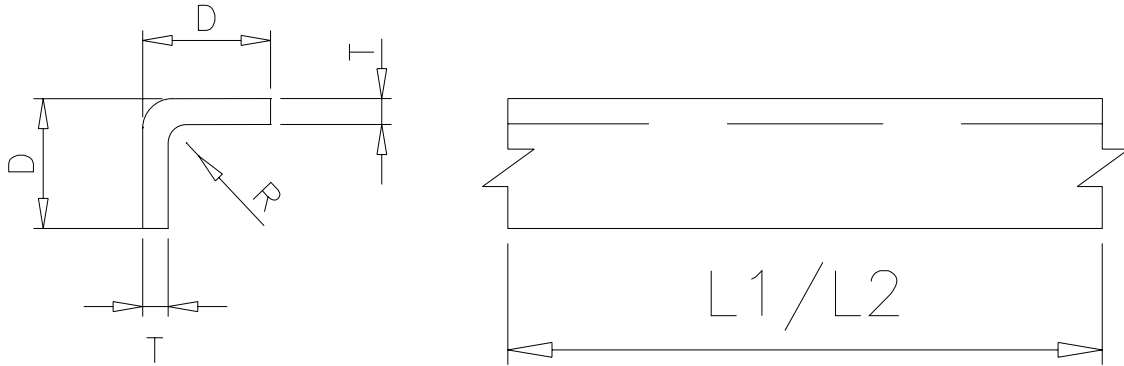
SIDE RAIL NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	13684, +4, -2			
ii.	Height 1	H1	162, +2, -2			
iii.	Height 2	H2	167, +2, -2			
iv.	Flanges	D	75+/-1			
v.	Thickness	T	5,+0.25,-0.25			
vi.	Radius	R	10+/-1.5			
vii.	Angle	-	+/-1°			
viii.	Waviness	-	2 max.			
ix.	Bow	-	1 in 600			
x.	Camber	-	1 in 600			
xi.	Twist	-	1deg/metre			
xii.						

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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CORNER BENT ANGLE



Ref: Drawing No. WD-10072-S-01 Item-6a& WD-09053-S-13 Item-3

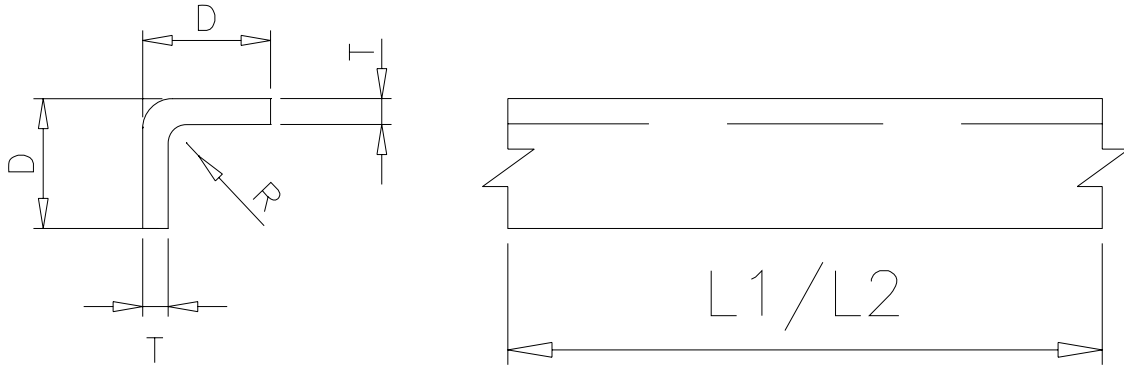
CORNER BENT ANGLE NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	5556, +3, -1			
ii.	Flanges	D	65+/-1.5			
iii.	Thickness	T	8,+0.4,-0.4			
iv.	Radius	R	16+/-1.5			
v.	Angle	-	+/-1°			
vi.	Waviness	-	2 max.			
vii.	Bow	-	1 in 600			
viii.	Camber	-	1 in 600			
ix.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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CORNER ANGLE



Ref: Drawing No. WD-10072-S-01 Item-6b& WD-09053-S-13 Item-9

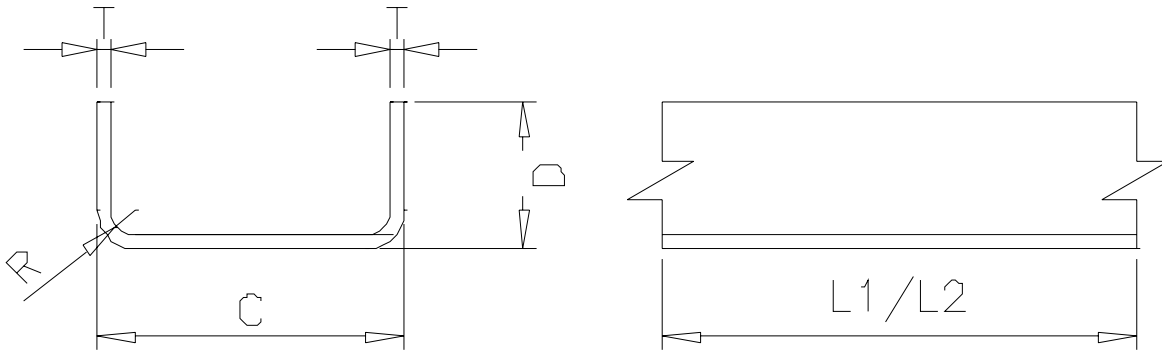
CORNER ANGLE NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	762, +1, -1			
ii.	Flanges	D	65+/-1.5			
iii.	Thickness	T	8,+0.4,-0.4			
iv.	Radius	R	16+/-1.5			
v.	Angle	-	+/-1°			
vi.	Waviness	-	2 max.			
vii.	Bow	-	1 in 600			
viii.	Camber	-	1 in 600			
ix.	Twist	-	1deg/metre			
x.						
xi.						
xii.						

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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END STANCHION (INNER)



Ref: Drawing No. WD-10072-S-01 Item-7a& WD-09053-S-13 Item-2

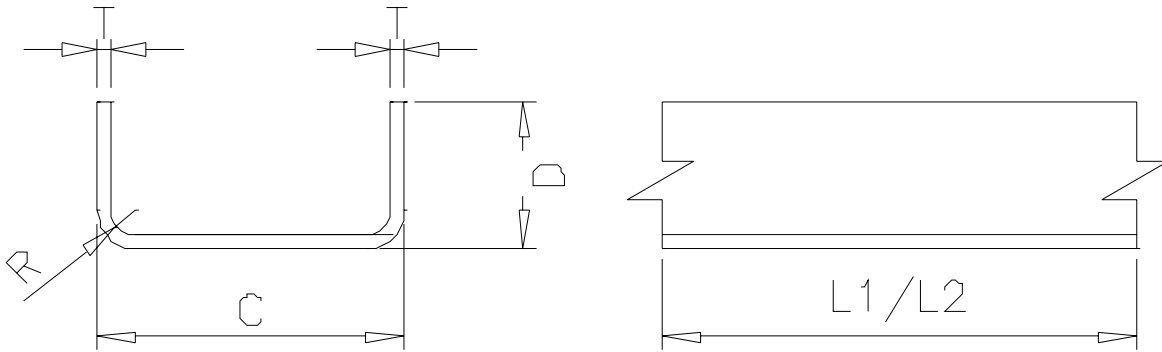
END STANCHION (INNER) NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	1451, +1, -1			
ii.	Height Overall	C	125, +1.5, -1.5			
iii.	Flanges	D	60+/-1.5			
iv.	Thickness	T	5,+0.25,-0.25			
v.	Radius	R	10+/-1.5			
vi.	Angle	-	+/-1°			
vii.	Waviness	-	2 max.			
viii.	Bow	-	1 in 600			
ix.	Camber	-	1 in 600			
x.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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END STANCHION (OUTER)



Ref: Drawing No. WD-10072-S-01 Item-7b& WD-09053-S-13 Item-11

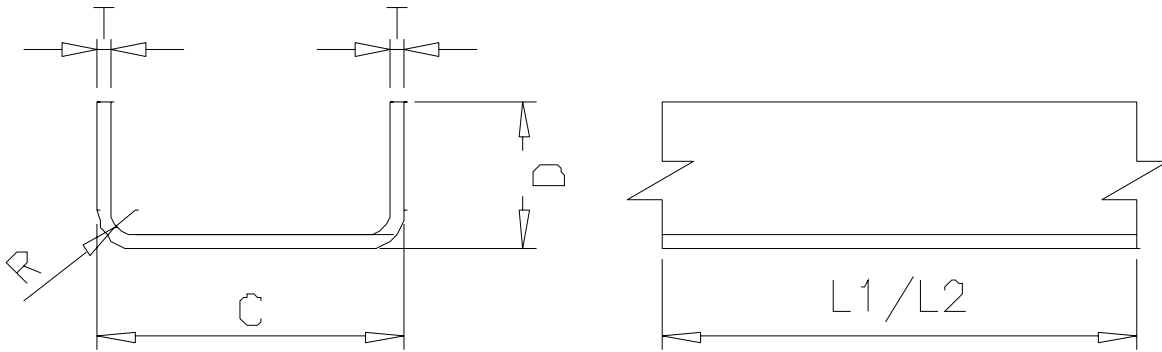
END STANCHION (OUTER) NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	1395, +1, -1			
ii.	Height Overall	C	125, +1.5, -1.5			
iii.	Flanges	D	60+/-1.5			
iv.	Thickness	T	5,+0.25,-0.25			
v.	Radius	R	10+/-1.5			
vi.	Angle	-	+/-1°			
vii.	Waviness	-	2 max.			
viii.	Bow	-	1 in 600			
ix.	Camber	-	1 in 600			
x.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STIFFENER CENTRE



Ref: Drawing No. WD-10072-S-01 Item-7c& WD-09053-S-13 Item-6

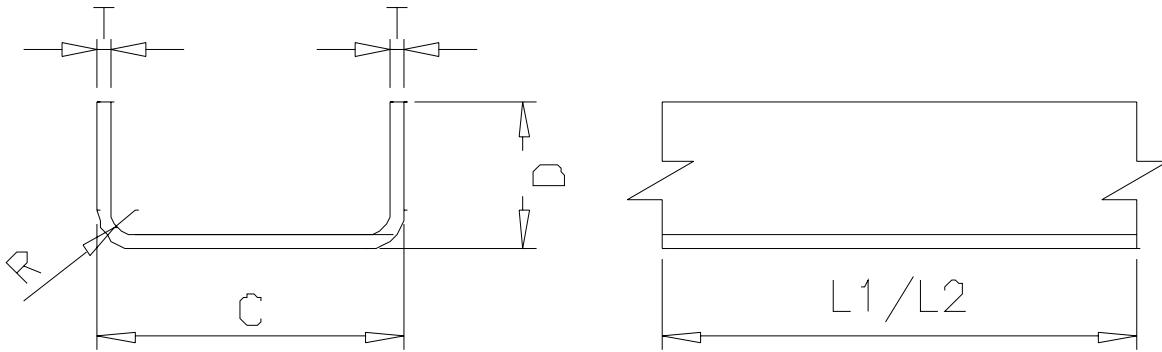
STIFFENER CENTRE NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	580, +1, -1			
ii.	Height Overall	C	125, +1.5, -1.5			
iii.	Flanges	D	60+/-1.5			
iv.	Thickness	T	5,+0.25,-0.25			
v.	Radius	R	10+/-1.5			
vi.	Angle	-	+/-1°			
vii.	Waviness	-	2 max.			
viii.	Bow	-	1 in 600			
ix.	Camber	-	1 in 600			
x.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STIFFENER INNER



Ref: Drawing No. WD-10072-S-01 Item-7d& WD-09053-S-13 Item-7

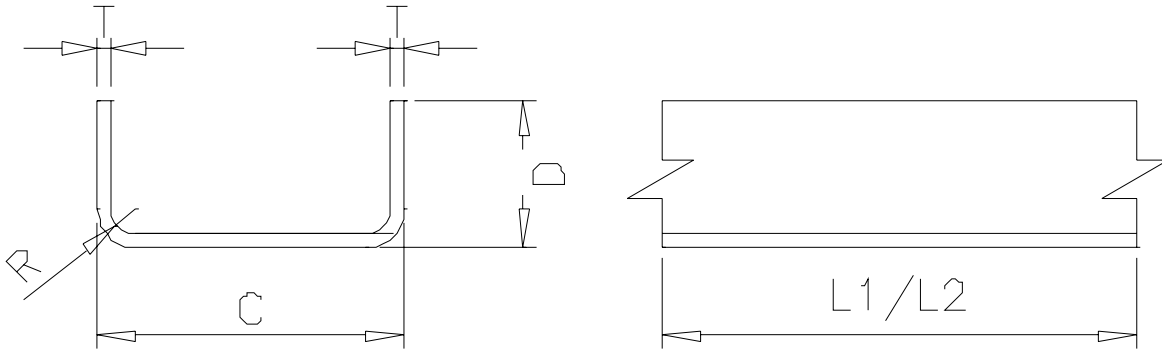
STIFFENER INNER NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	613, +1, -1			
ii.	Height Overall	C	125, +1.5, -1.5			
iii.	Flanges	D	60+/-1.5			
iv.	Thickness	T	5,+0.25,-0.25			
v.	Radius	R	10+/-1.5			
vi.	Angle	-	+/-1°			
vii.	Waviness	-	2 max.			
viii.	Bow	-	1 in 600			
ix.	Camber	-	1 in 600			
x.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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STIFFENER OUTER



Ref: Drawing No. WD-10072-S-01 Item-7e& WD-09053-S-13 Item-8

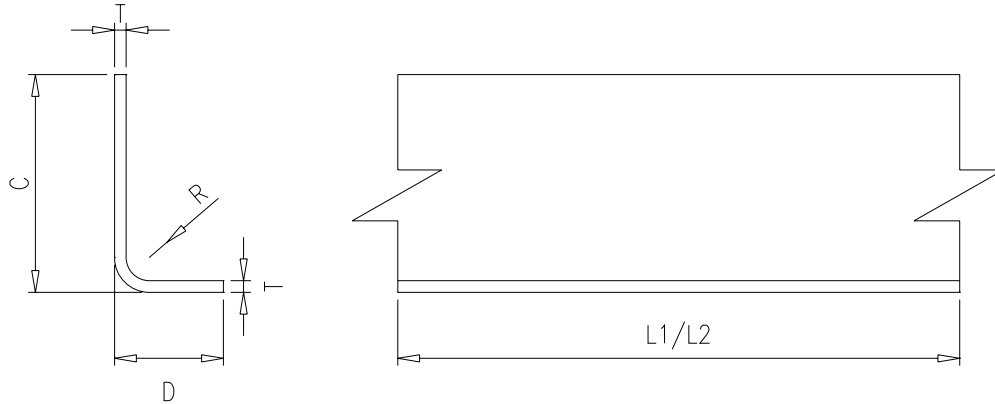
STIFFENER OUTER NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	544, +1, -1			
ii.	Height Overall	C	125, +1.5, -1.5			
iii.	Flanges	D	60+/-1.5			
iv.	Thickness	T	5,+0.25,-0.25			
v.	Radius	R	10+/-1.5			
vi.	Angle	-	+/-1°			
vii.	Waviness	-	2 max.			
viii.	Bow	-	1 in 600			
ix.	Camber	-	1 in 600			
x.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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HEAD STOCK CRIB ANGLE



Ref: Drawing No. WD-10072-S-01 Item-8& WD-09053-S-13 Item-05

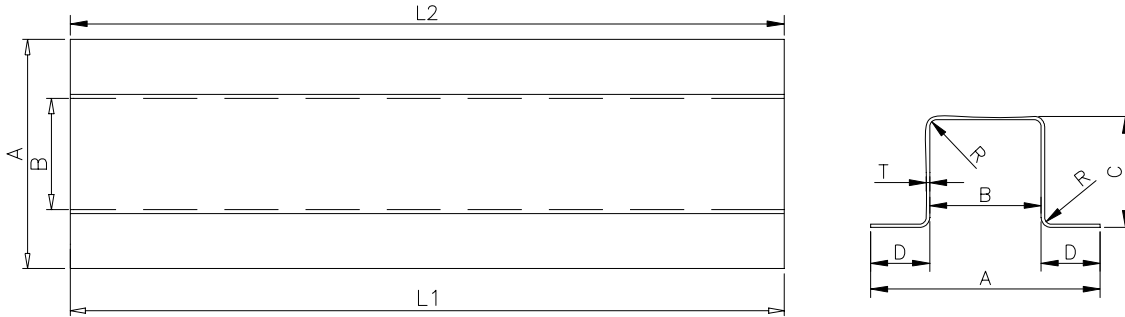
HEAD STOCK CRIB ANGLE NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Length Overall	L1/L2	2930, +3, -1			
ii.	Height Overall	C	150, +1.5, -1.5			
iii.	Flanges	D	75+/-1.5			
iv.	Thickness	T	8,+0.4,-0.4			
v.	Radius	R	16+/-1.5			
vi.	Angle	-	+/-1°			
vii.	Waviness	-	2 max.			
viii.	Bow	-	1 in 600			
ix.	Camber	-	1 in 600			
x.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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END CENTRE SILL(HAT SECTION)



Ref: Drawing No. WD-10072-S-01 Item-9 & WD-09053-S-05 Item-20

CENTRE SILL NO:			Date:			
SL. NO.	Location		Nominal Dimensions & Allowable Deviation	Actual Dimension		Remarks
				Works Inspection	RDSO Inspection	
i.	Bottom width	A	674, +3,-3			
ii.	Top width(Inside)	B	327,+3,-0			
iii.	Length Overall	L1/L2	2095, +3, -1			
iv.	Height Overall	C	327, +1.5, -1.5			
v.	Flanges	D	173.5+/-1.5			
vi.	Thickness	T	10,+0.5,-0.0			
vii.	Radius	R	20+/-1.5			
viii.	Angle	-	+/-1°			
ix.	Waviness	-	2 max.			
x.	Bow	-	1 in 600			
xi.	Camber	-	1 in 600			
xii.	Twist	-	1deg/metre			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

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AMENDMENT No. 1 OF January,2018 APPLICABLE TO CHECK SHEET NO. WD-CS-01-BRN22.9-BMBS-DESIGN-C-CRF- 2012 FOR BOGIE RAIL WAGON TYPE – ‘BRN22.9 WITH BMBS’

Due to conversion of Fixed End Arrangement to Foldable Bulkhead, Sr. No. 6.a to 8. at contents (page no.2) may be read as deleted.

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