

I/57526/2024



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भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226011

Government of India - Ministry of Railways
Research Designs & Standards Organisation
Lucknow - 226011

MW/CPL/BG/HT

27 March 2024

1. All Coupler Component manufacturer
2. All Wagon Manufacturer
3. Chief Workshop Manager
(As per attached list)

Sub: Development of coupler components through forging process in addition to casting process.

Coupler components i.e. Yoke Pin Support, Back Stop and Draft Gear Front Follower are being manufactured and supplied as per RDSO drawing No. WA/BD-4462 (for Yoke Pin Support), RDSO drawing No. W/BD-699 (for Back Stop) and RDSO drawing No. WD-24020-S-01 (for Draft Gear Front Follower).

In order to enhance production rate and availability of above mentioned components, manufacturing by forging method has been also incorporated in addition to the existing casting method.

Accordingly, the drawings of Yoke Pin Support and Back Stop have been revised by incorporating manufacturing process through forging also and a new drawing No. WD-24020-S-01 has been prepared for the Draft Gear Front Follower. Revised drawings for Yoke Pin Support, Back Stop and new drawing for Draft Gear Front Follower of CBC are as given below.

SN	Component Name	Drawing No.
1	Yoke Pin Support	WA/BD-4462, Alt.-7
2	Back Stop	W/BD-699, Alt.-4
3	Draft Gear Front Follower	WD-24020-S-01

Inspection check sheet for above mentioned coupler components will also be revised and same will be issued in due course.

The above mentioned drawings are being enclosed herewith and also have been uploaded in vendor directory on UVAM portal. While adopting manufacturing process (casting/forging) for above three coupler components, drawings mentioned in above table may be used.

This has approval of competent authority.

Encl.- As above

Digitally Signed by Arvind
Kumar

Date: 27-03-2024 17:28:45
(Arvind Kumar)
Director Wagon

Reason: Approved
For Director General Wagon

Copy to: Executive Director (I&L)/RDSO,

- (i) Shankar Market, Near IRCOT Building, New Delhi-110001.
- (ii) 3, Koilaghat Street, Kolkata-700 001.
- (iii) 1st Floor, New Annexe Building, WR, Churchgate, Mumbai-400020.

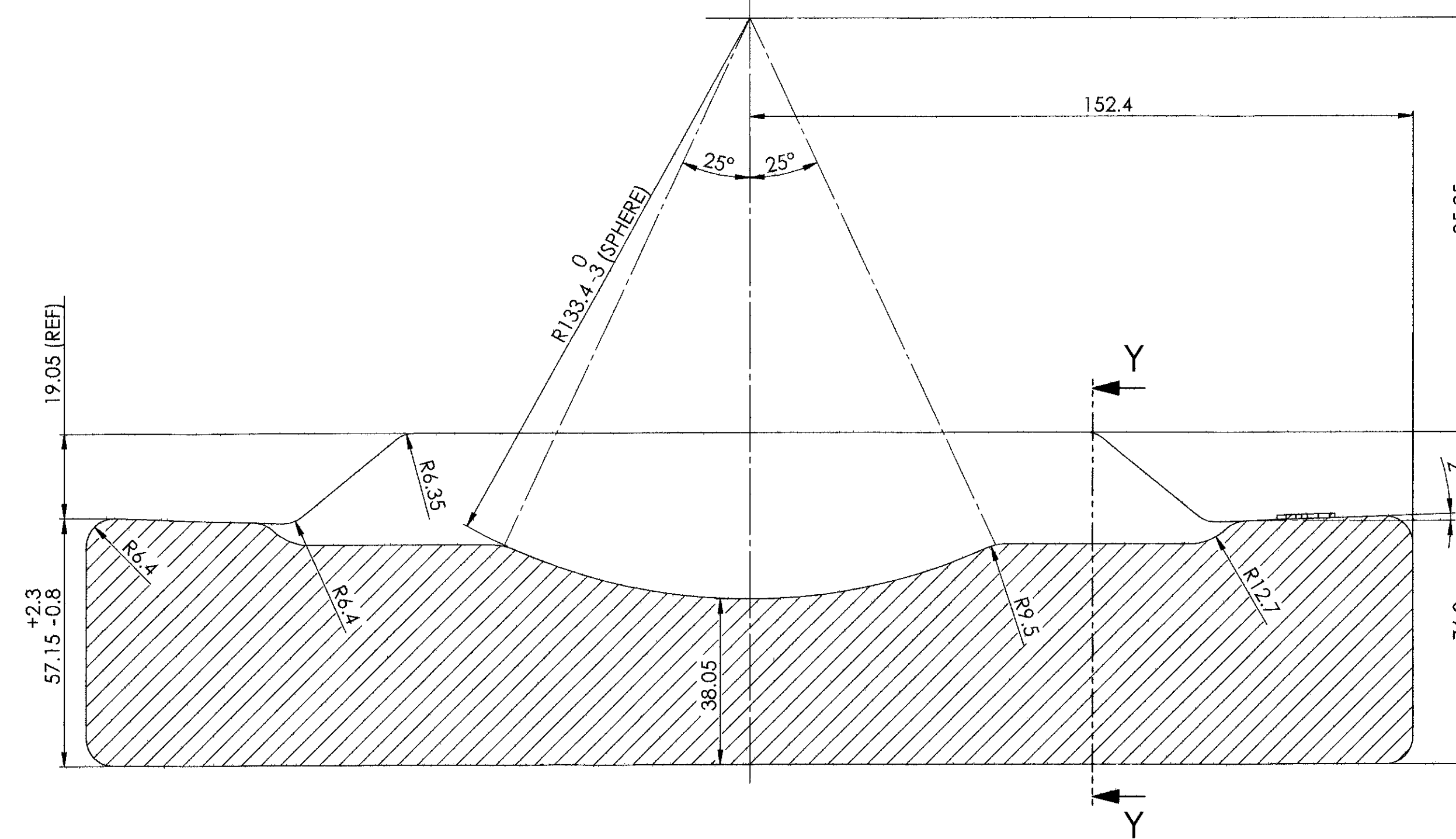
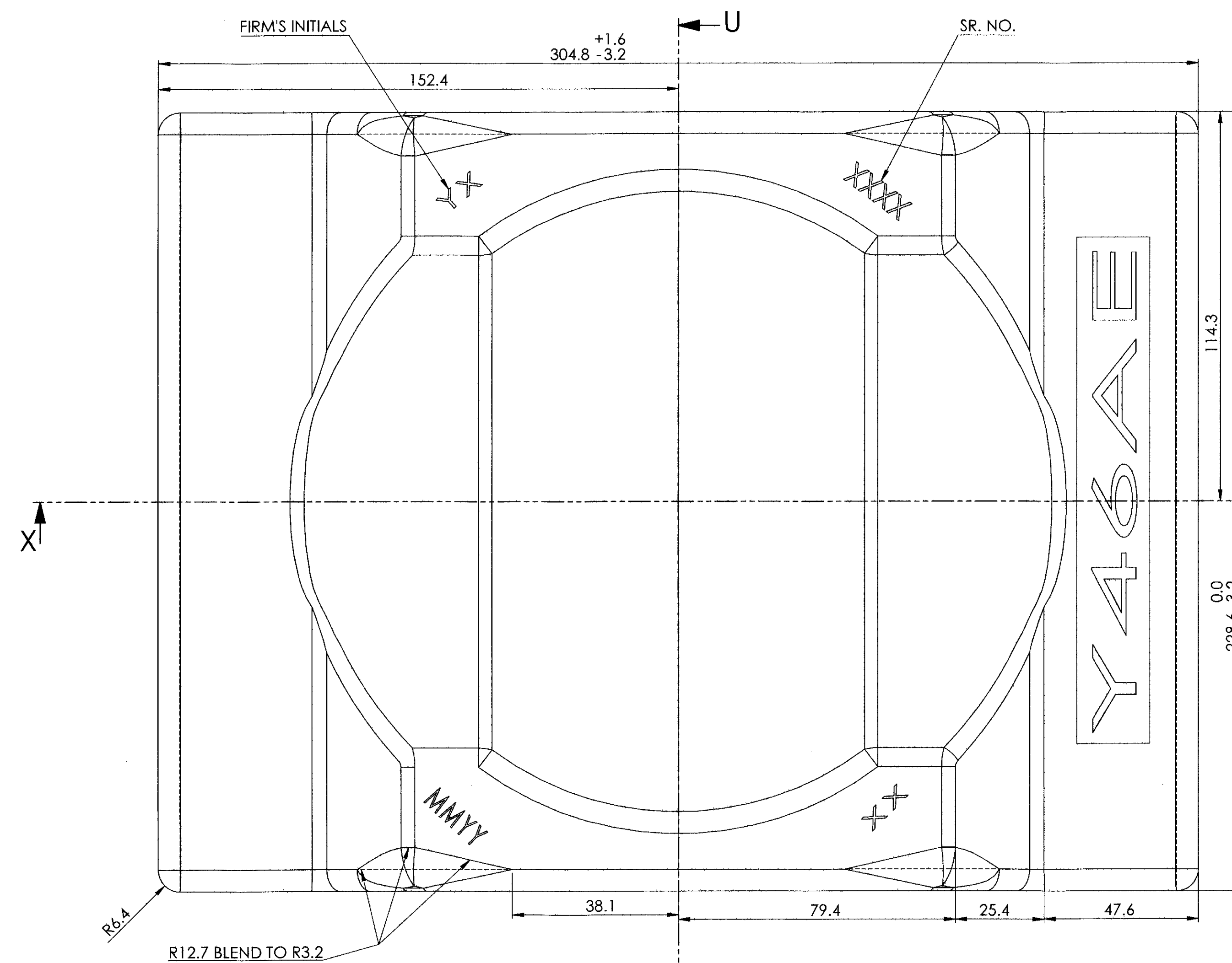
1	M/S Atul Engineering Udyog Private Limited-Agra
2	M/S Frontier Alloy Steels Ltd-Kanpur
3	M/S Hindusthan Engineering & Industries Limited
4	M/S Jai Multi Engineering Co.-Dera Bassi
5	M/S Jupiter Wagons Limited-Kolkata
6	M/S Kharagpur Metal Reforming Industries Pvt Ltd-Kharagpur
7	M/S Nf Forgings Pvt. Ltd.-Kolkata
8	M/S Shree Kedar Metal Foundries-Sangli
9	M/S Texmaco Rail And Engineering Limited-Kolkata
10	M/S Besco Limited, Kolkata
11	M/S Bhilai Engineering Corporation Limited-Bhilai
12	M/S Brand Alloys Private Limited-Kolkata
13	M/S Ombesco Rail Products Limited-Dhanbad
14	M/S Oriental Foundry Private Limited-Kutch
15	M/S Raneka Industries Ltd.-Pithampur(Dist)Dhar
16	M/S Rine Engineering Pvt. Ltd-Baddi
17	M/S Siena Engineering Pvt. Ltd.-Indore
18	M/S Titagarh Rail Systems Limited-Kolkata
19	M/S N.K. Iron Industries-Agra
20	M/S Hi Tech Investment Castings Private Limited-Sihor
21	M/S Lalbaba Industrial Corporation Private Ltd.-Howrah
22	M/S Nikoo Precision Cast Pvt Ltd-Rajkot
23	M/S Vikas Hitech Castings-Howrah
24	M/S Industrial Forge And Engineering Company Limited-Jamshedpur
25	M/S Sati Auto Components Private Limited-Saraikela
26	M/S Thirumala Precicasts Pvt. Ltd.

2. All Wagon Manufacturers

1	M/s Amzen Transportation Industries Private Limited, 3, L.S.C, Pamposh Enclave, Greater Kailash - I, New Delhi – 110048.
2	M/s BESCO Limited (Wagon Division) 8, Anil Maitra Road, Ballygunge, Kolkata – 700 019
3	M/s BESCO Limited (Foundry Division) “Poonam”, 7th Floor, 5/2, Russell Street, Kolkata – 700 071
4	M/s Jupiter Wagons Limited Registered Office Address: 4/2 Middleton Street, Kolkata–700 071
5	M/s Hindusthan Engineering & Industries Limited, Mody Building, 27, Sir R. N. Mukherjee Road, Kolkata – 700 001
6	M/s Jindal Rail Infrastructure Limited, Jindal ITF Centre, 28, Shivaji Marg, New Delhi – 110015
7	M/s Modern Industries G T Road, Sahibabad, Ghaziabad (Uttar Pradesh) – 201 005
8	M/s Oriental Foundry Private Limited, Shop No. 17, Rizvi Park Co-op Society, E Wing, S. V. Road, Santacruz (W), Mumbai – 400054.
9	M/s Sail Rites Bengal Wagon Industry Private Limited, Dist. Burdwan, West Bengal-713343
10	M/s Texmaco Rail & Engineering Limited, 9/1, Birla Building, Sir R. N. Mukherjee Road, Kolkata – 700 001
11	M/s Titagarh Wagons Limited Registered Office Address: Titagarh Tower, 756, Anandpur, Kolkata – 700107
12	M/s Braithwaite & Company Limited, 5, Hide Road, Kolkata (West Bengal) – 700 043
13	M/s SAIL RITES Bengal Wagon Industry Private Limited, Kulti, Burdwan, WB - 713 343
14	M/s BEML Limited, Bangalore Complex, New Thippasandra Post, Bangalore, Karnataka –560075

3. Chief Workshop Managers

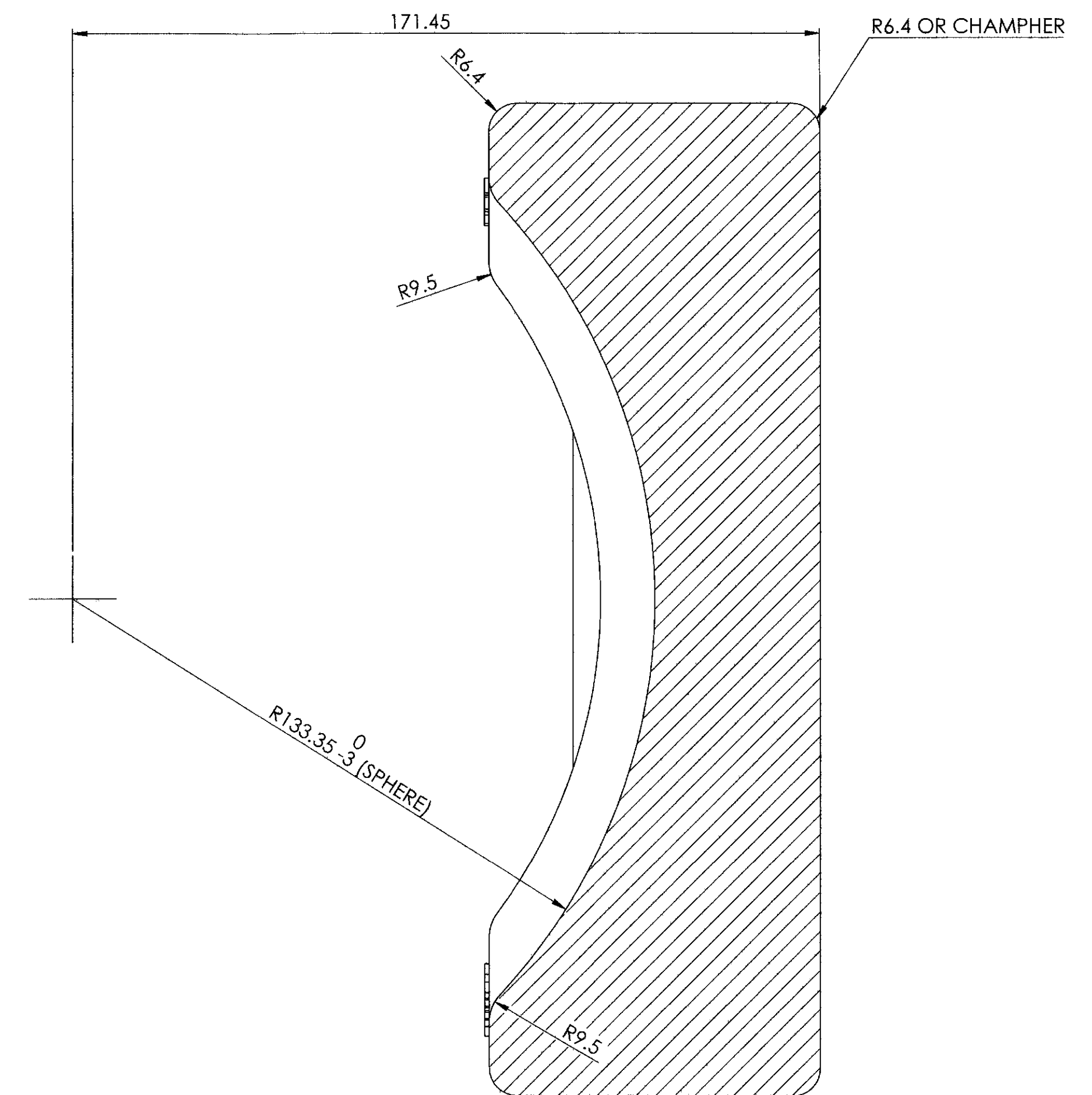
1	Chief Works Manager, Mechanical Workshop, East Central Railway, Samastipur (Bihar) –848101
2	Chief Works Manager, Locomotive Workshop, Eastern Railway, Jamalpur, District: Munger (Bihar) – 811214
3	Chief Works Manager, Central Workshops, Southern Railway, Ponmalai, Tiruchirapalli (Tamil Nadu) – 620004
4	Chief Works Manager, Mechanical Workshop, Northern Railway, Civil Albert Road, Amritsar (Punjab) – 143001



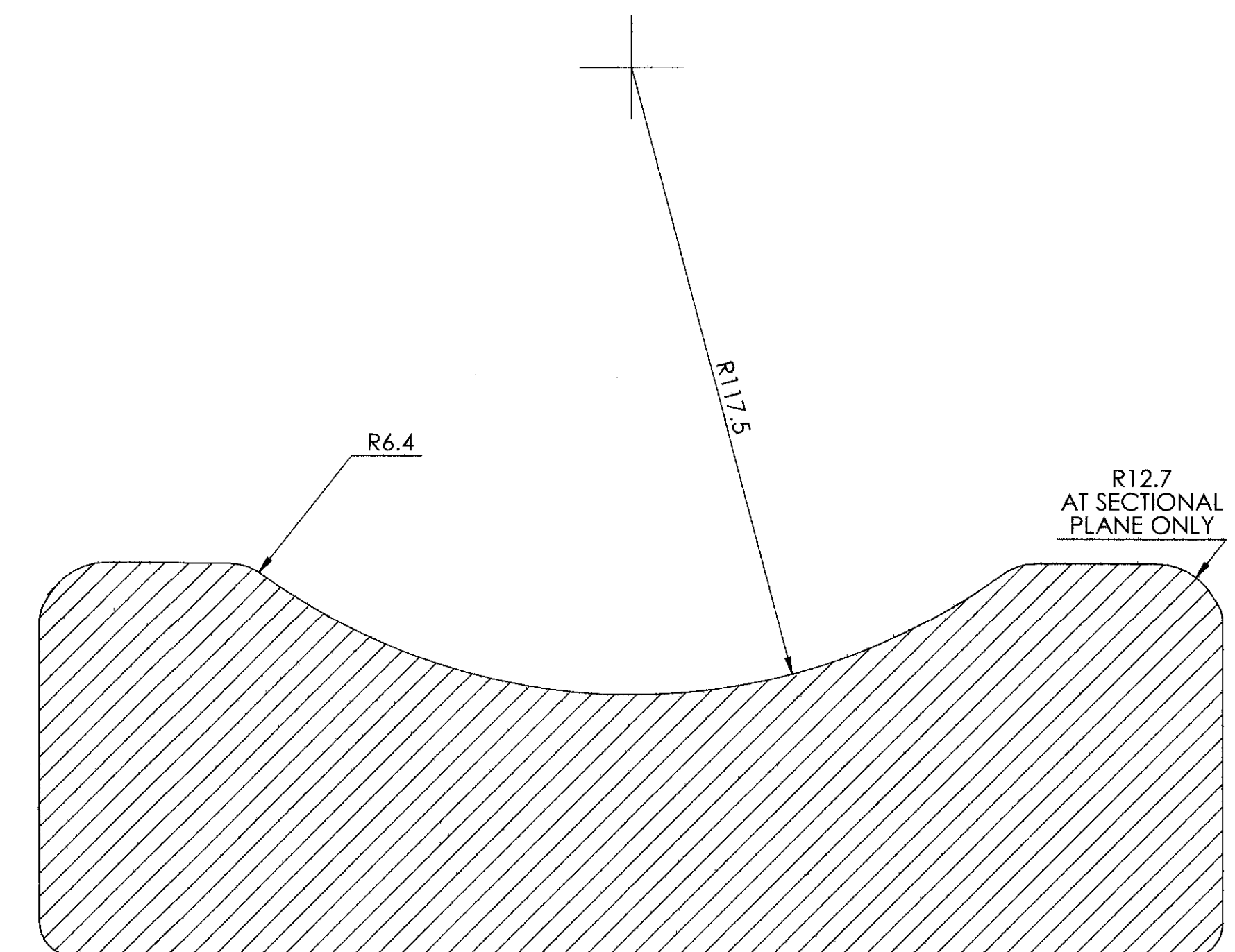
SECTION X-X

(FOR FORGED DRAFT GEAR FRONT FOLLOWER)

NOTE: FOR FORGING, A DRAFT ANGLE OF 5° (MAX) MAY BE ADOPTED IN FOLLOWERS.



SECTION U-U



SECTION Y-Y

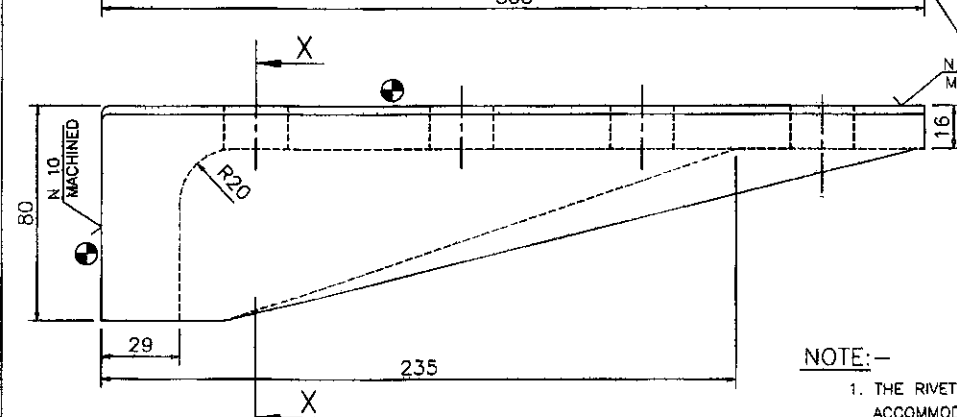
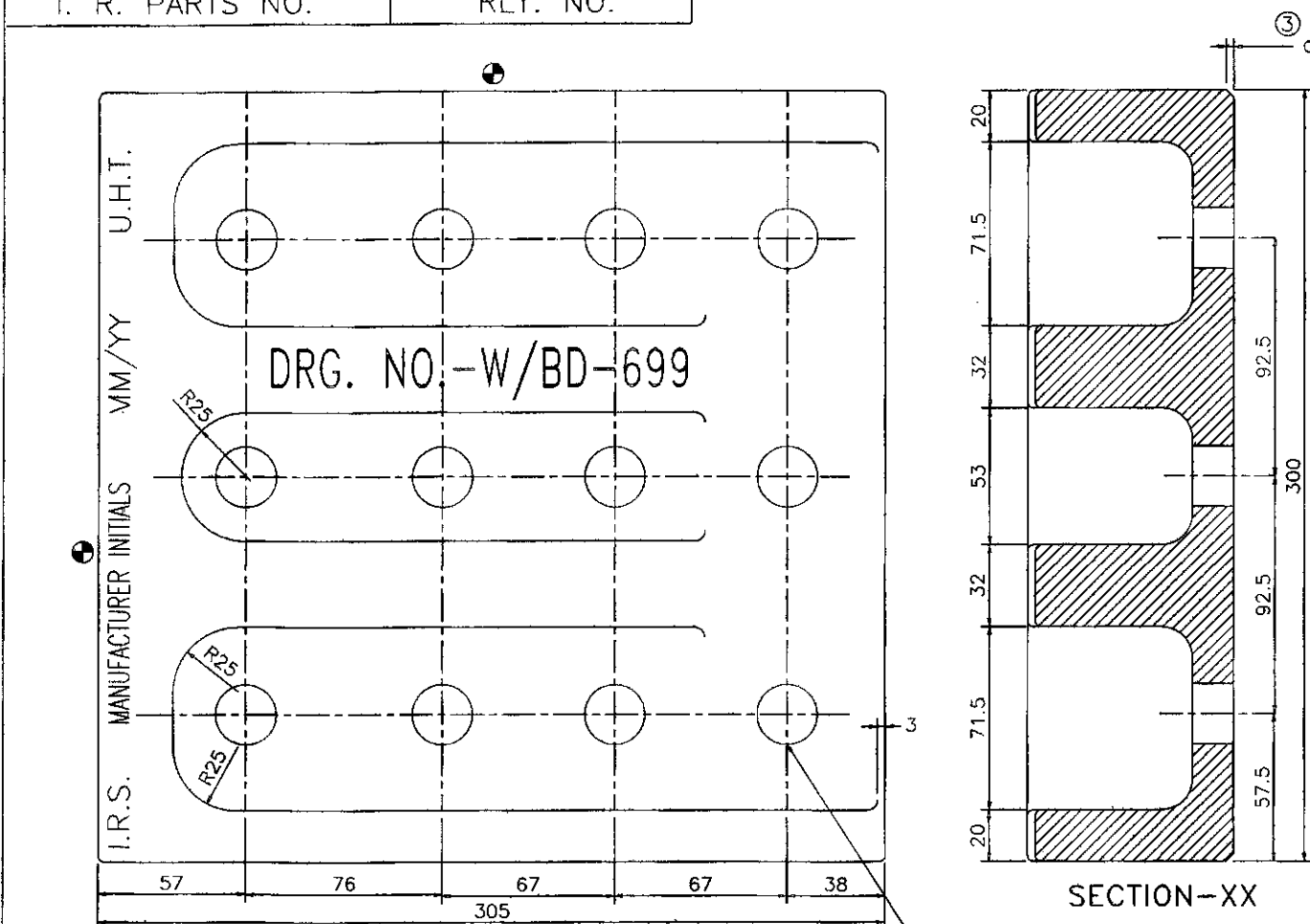
PRELIMINARY SKETCH			
SUPERSEDED BY	DATE	DRAFT GEAR FRONT FOLLOWER (BY FORGING METHOD)	
SUPERSEDES			
SCALE PASSED			
CHECKED			
DRAWN			
J.S.NO.	WD-24020		
B.G.	R.D.S.O. [W]	GROUP	WD-24020-S-01 I. R. PART NO.

ALT.	ITEM	AUTHY	DESCRIPTION	DATE	ASSY. DRG.
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W/BD-699

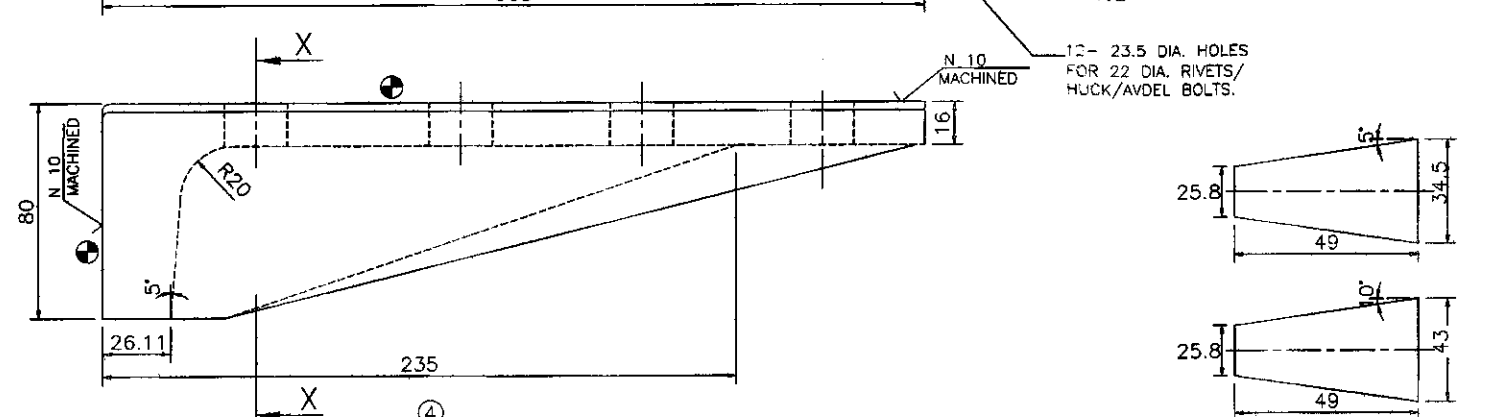
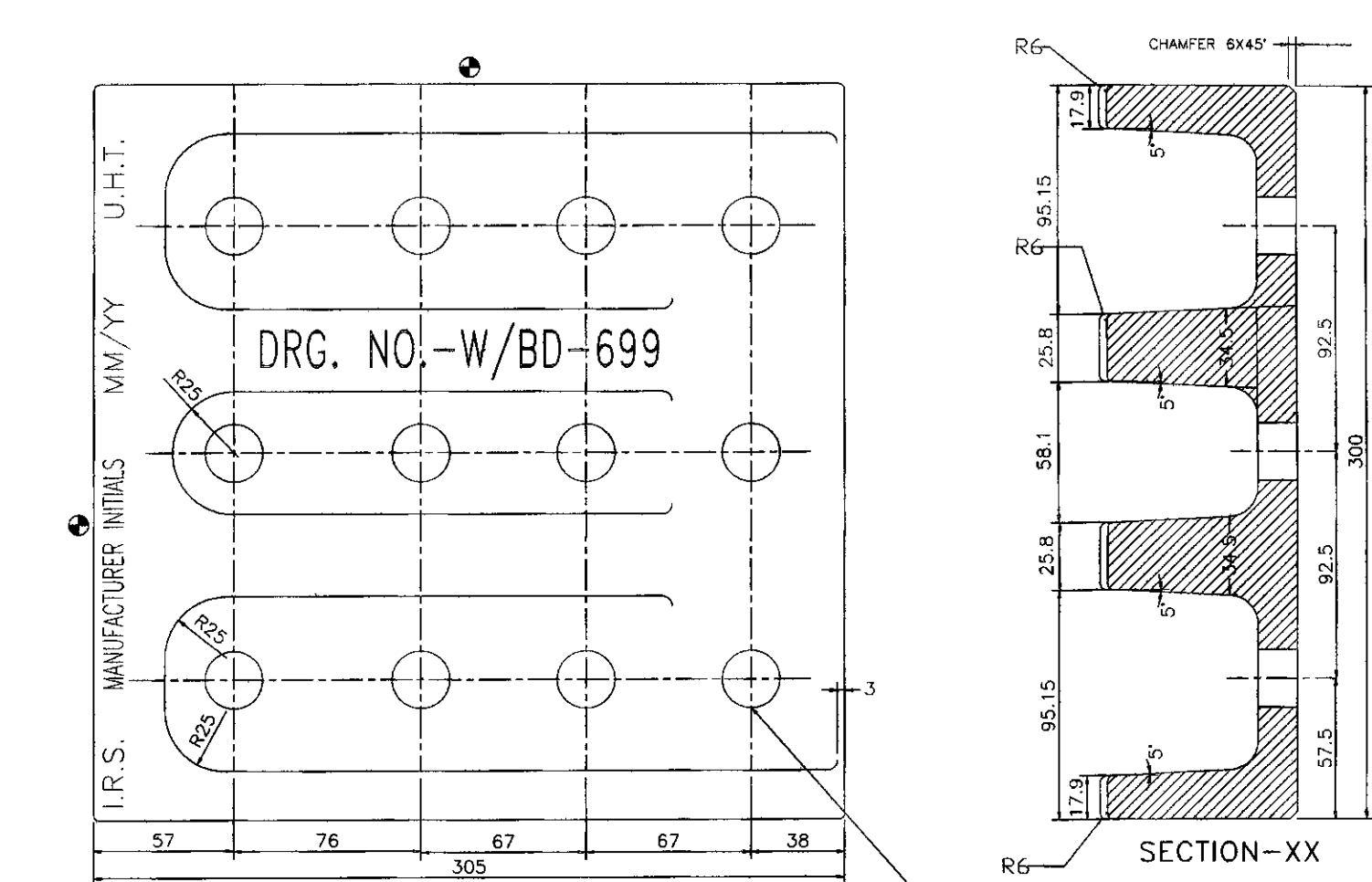
I. R. PARTS NO.

RLY. NO.



NOTE:-

1. THE RIVET/BOLT HOLES WHERE REQUIRED MAY BE STOP FACED TO ACCOMMODATE THE RIVET/BOLT HEAD.
2. ALL SURFACE MARKED THUS \oplus MUST BE SMOOTH, TRUE, PARALLEL & AT RIGHT ANGLES.
3. DRAFT ANGLE (FOR FORGING) SHOULD BE IN BETWEEN 5° TO 10°.
4. ALL MARKINGS WILL BE IN 12 mm SIZE & 2 MM EMBOSSED LETTERS.



DRAFT ANGLE FOR FORGING

(NOT TO SCALE)

GR.NO.	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12
Ra/μm	.025	.05	.1	.2	.4	.8	1.6	3.2	6.3	12.5	25	50
SYMBOL	▽▽▽	▽▽	▽	▽	▽	▽	▽	▽	▽	▽	▽	▽

SURFACE ROUGHNESS VALUE TO IS:3073

SEPERSEDED BY	
SUPERSEDES	DATE
PASSED	
CHECKED	
DRAWN	
TRACED	
J. SHEET	
B. G.	R.D.S.O. [W]

MTI.	
SPEC.NO.	
TREAT.	
WEIGHT	
SCALE	
REF.DRG	SK-122-62655

02/24	④	WD-24021	DRAFT ANGLE ADDED FOR FORGING COMPONENTS. NOTE NO.-03 & 04 ADDED. VIEW-02 ADDED FOR FORGED BACK STOP.
01/11	③	WD-11002	DRAWING REVISED AND CHAMFER CHANGED FROM 3X45° TO 6X45°
09/08	②	WD-08079	MATERIAL CHANGED
12/05	①	WD-05098	HUCK/AVDEL BOLT ADDED
DATE	ALT.NO.	AUTHY.	DESCRIPTION
			C.K.R.

BACK STOP [B.G.]

FOR STANDARD AND HIGH TENSILE CENTER BUFFER COUPLER OF BROAD GAUGE WAGONS.
CORRES. RLY. NO.
W/BD-699
I. R. PART NO.

A3 03/24

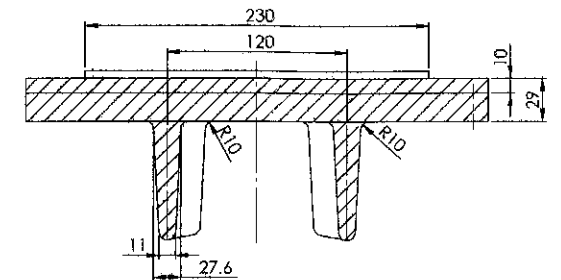
* CAST "IRS" & PART NO MANUFACTURER'S NAME OR INITIALS
MONTH/YEAR OF MANUFACTURE IN 12 MM TYPE ON BOTTOM OF YPS.
** FOR WD-70-BD YOKE PIN SUPPORT MARKING SHALL BE AS PER NOTE NO.-5.

THE FOLLOEING GAUGES SHALL BE USED TO CHECK THE YOKE PIN SUPPORT

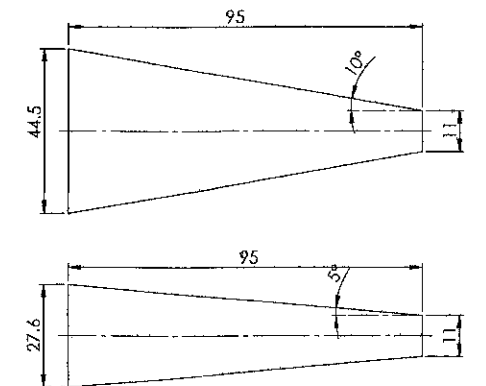
1. HOLE CENTRES WITH BOUNDARY GAUGE.
2. DEPRESSION WITH WEAR PLATE GAUGE.
3. THICKNESS OF FLANGE "GO" & "NO GO" GAUGE.
4. FOR OTHER REQUIREMENT REFER TO INDIAN RAILWAY SCHEDULE OF TECHNICAL REQUIREMENT WD-70-BD
5. STAMPING SHALL BE DONE AS 'UHT' AFTER IRS.

A	WEAR PLATE	1	IS:2062 FE410 CuWA
W/BD-4462	YOKE PIN SUPPORT	1	CAST STEEL Gr 'B' AAR M201 OR FOR FORGING VERSION IS:1875, CLASS 2-1992
PART	DESCRIPTION	NO. OFF	MAT. & SPEC.

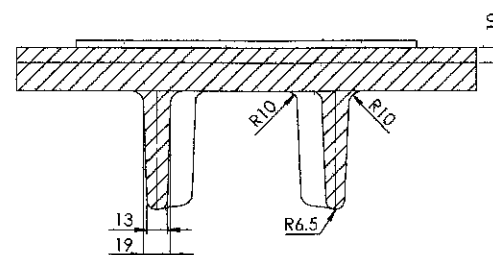
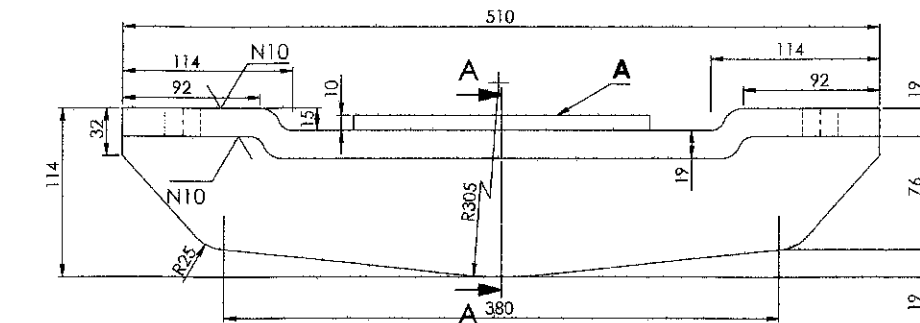
NO SEPERATE DRG.



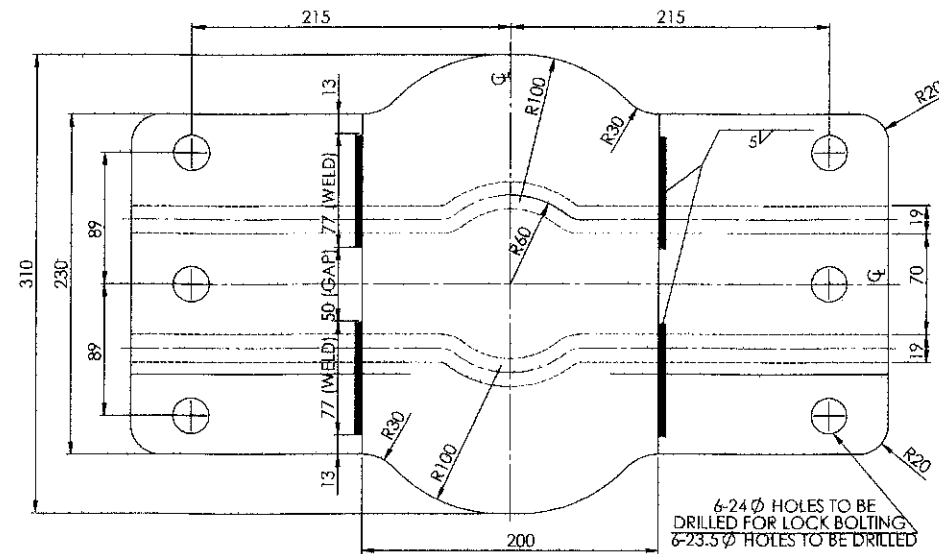
SECTION B-B



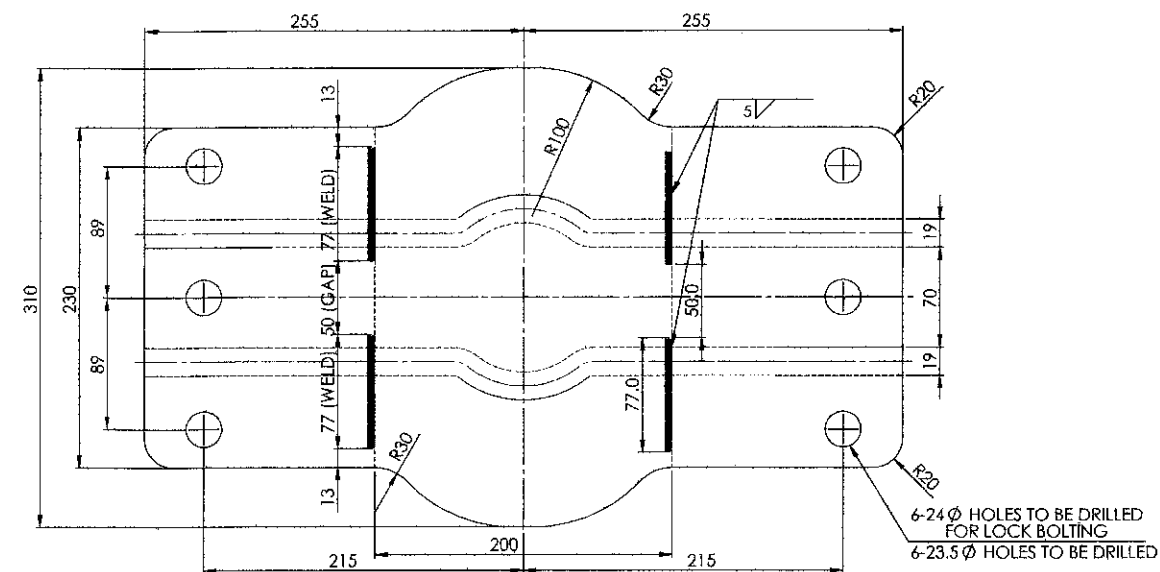
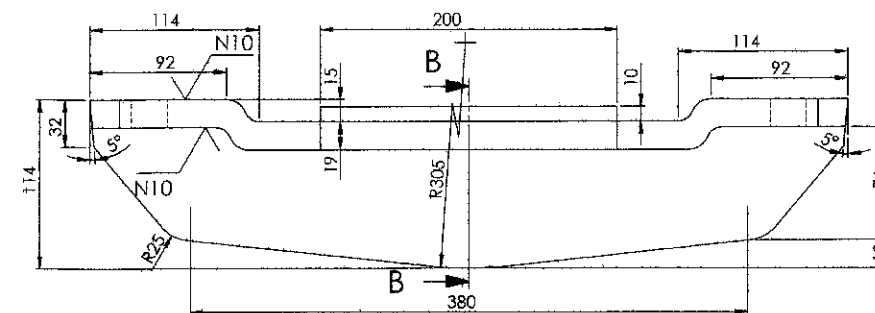
DRAFT ANGLE FOR FORGED COMPONENTS



SECTION A-A



VIEW-A (FOR CASTING)



VIEW-B (FOR FORGING)

DRAFT ANGLE SHOULD BE IN BETWEEN 5° TO 10°.

	Gr. NO	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12
	Ra/um	0.025	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25	50
CRK	SYMBOL	▽▽▽			▽▽			▽			▽		~
	SURFACE ROUGHNESS VALUE TO IS:3073												

SIZE	MTL	SEE TABLE
FORM	SPEC. NO.	-DO-
RLY. PATT.	TREAT	
	WEIGHT	
	SCALE	DO NOT SCALE
	REF. DRG.	SK-77584

02/24	⑦	WD-24021	MATERIAL REVISED. VIEW-02 ADDED FOR FORGED VERSION.
10/16	⑥	WD-16062	REVISED
06/09	⑤	WD-09041	MACHINING SYMBOL 'N10' ADDED & STR REVISED.
04/08	④	WD-08039	ADDED AS 'FOR LOCK BOLTING 6-23.5 Ø HOLES TO BE DRILLED.
12/94	③	WD-95001	MATERIAL CHANGED TO AAR M 201 Gr. B
6/94	②	WD-94059	MATERIAL REVISED

7/84	①	WD-84023	REVISED
DATE	I.R. ALT. NO.	AUTHY	DESCRIPTION
			YOKE PIN SUPPORT

FOR AAR TYPE CENTRE BUFFER COUPLER OF B.G. WAGONS	
CORRES RLY. NO.	
WA/BD-4462	
I. R. PART NO.	