

EMU/M-0-1-020

▽ ROUGH MACHINED	①1 ROUGH CLEANING	ALTERATIONS (k) 06/2001 ALTERNATIVE MATERIAL FOR ITEM-2 DELETED. VIEW FOR DETAIL OF JOINT DELETED. MAT.SPEC.UPDATED FOR ITEM-2.
▽▽ FINISH MACHINED	①8 CHAMFERED	
▽▽▽ FINE FINISH MACHINED	①1b BURRS REMOVED	
	②2 DIE FORGED	
	③c HONED	

① 03/2012

FOR ITEM-1, MAT. SPEC. &
REMARKS DELETED AND
REF. DRG. NO. ICF/J&T/SK/
FORGE-0-1-219 ADDED.

-Sd. 28.03.2012

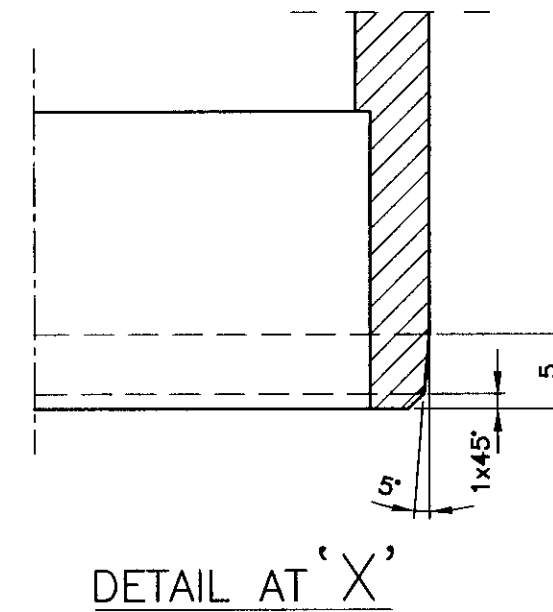
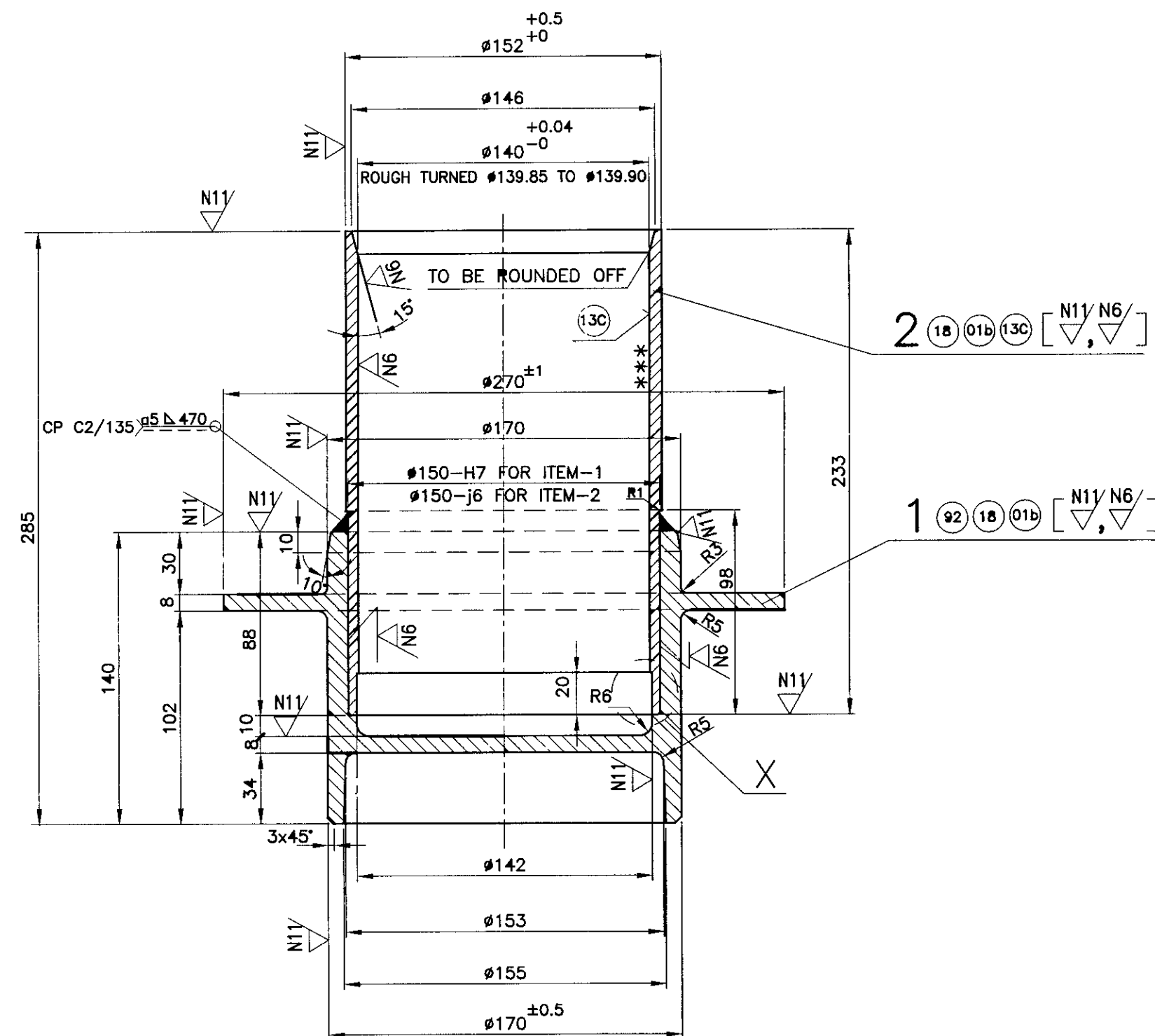
SSE/D AME/D

(m) 12/2024

NOTE - 4 TO 6 ADDED.
NOTE-3 MODIFIED. WELDING
NOTATION UPDATED.

[Signature] *[Signature]*


SSE/D AME/D




NOTE:

1. LUBRICANT OIL 'IOC SERVOSPIN 12' TO SPECN IS:493/93/2 Gr.VG 10 MIXED WITH KEROSENE AT 1:1 RATIO SHALL BE USED FOR HYDRAULIC TESTING OF L.S.SEATS.
2. LEAKAGE TEST SHALL BE CARRIED OUT AT A PRESSURE OF 14Kg/sq.cm. OR 200 PSI
3. FOR UNTOLERANCED DIMENSIONS & SURFACE FINISH VALUE, REFER ICF/STD-9-0-001.
4. PAINTING PROCEDURE:
 - 4.1 ***- MARKED SURFACES SHALL NOT BE PAINTED AND SHALL BE SUITABLY MASKED/PROTECTED DURING PRETREATMENT & PAINTING.
 - 4.2 THE FIRST COAT IS NEEDED TO BE APPLIED WITHIN 4 HOURS AFTER PRE TREATED. HIGH PERFORMANCE ANTI CORROSION EPOXY COATING (2 PACK) TO RDSO SPEC NO. M&C/PCN/123 (LATEST REVISION) HAVING COLOUR GREEN WITH DFT OF 75 -0/+30 MICRONS IS TO BE DONE.
 - 4.3 FINAL COAT OF TWO COMPONENT EPOXY TOP COAT ELASTICIZED TO RCF TECHNICAL SPECIFICATION MDTs-094 (LATEST REVISION) WITH SHADE TO RAL-7012 HAVING DFT OF 200 -0/+60 MICRONS IS TO BE DONE.
 - 4.4 MACHINED SURFACES SHALL BE PROTECTED WITH RUST PREVENTIVE OIL.
5. FOR WELD TESTING PREFERENCES, REFER ICF/STD-9-0-998.
6. FOR WELD PROCEDURE SPECIFICATION (WPS), REFER ICF/STD-9-0-999.

NO.OF ASSY. REQD. PER COACH

TYPE OF COACH	COL.I.
 EMU/M, DC/EMU/M, DMU/DPC, MEMU/DMC DHMU/DPC, DETC, DHTC ARTV, RRV/J, ACEMU/M/ASR DCEMU/M/ASR, DMU/DPC5 AC/DCEMU/M2,C2&D2	16

DHMU/DPC-0-1-001
AC/DC EMU/M2-0-1-201
EMU/M-0-1-033
EMU/M-0-1-001
ASSEMBLY DRAWINGS

03.12.2024	29.11.2000	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	A.M.E/D

[illegible]

UNLESS OTHERWISE STATED IN THE DRAWINGS, DIMENSIONS OVER TO OR BETWEEN SURFACES FOR WHICH NO LIMITS ARE GIVEN SHALL BE WITHIN THE TOLERANCES GIVEN BELOW.													
DEVIATIONS FOR LINEAR DIMENSIONS ALL DIMENSIONS IN MILLIMETRES													
CLASS OF DEVIATION		RANGE OF NOMINAL DIMENSIONS											
	ABOVE	0.5	3	6	30	120	315	1000	2000	4000	8000	12000	16000
	UPTO AND INCLUDING	3	6	30	120	315	1000	2000	4000	8000	12000	16000	20000
MACHINED		±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3	±4	±5	±6
FABRICATED		-	±0.2	±0.5	±0.8	±1.2	±2	±3	±4	±5	±6	±7	±8

ROUGHNESS VALUE												
SYMBOL	▽▽▽▽			▽▽▽			▽▽			▽	~	
Ra IN MICRONS	0.025	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25	50
ROUGHNESS GRADE	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12

DEVIATIONS FOR ANGULAR DIMENSIONS ALL DIMENSIONS IN MILLIMETRES								
CLASS OF DEVIATION	PERMISSIBLE VARIATIONS ON LENGTH OF SHORTER SIDE OF ANGLE							
	UPTO 10		OVER 10 TO 50		OVER 50 TO 120		OVER 120	
	DEGREE	mm PER 100 mm	DEGREE	mm PER 100 mm	DEGREE	mm PER 100 mm	DEGREE	mm PER 100 mm
MACHINED	±1°	±1.8	±30'	±0.9	±20'	±0.6	±10'	±0.3
PRESSED/ FABRICATED	±1°30'	±2.6	±50'	±1.5	±25'	±0.7	±15'	±0.4

ALTERATIONS		
①	2/99	
TITLE OF DRG. AND NOTE REVISED.		
SD	-Sd-	SME/DSS
②	01/2001	
DEVIATIONS FOR ANGULAR DIMENSIONS TABLE ADDED. DRG. REDRAWN IN CAD.		
-Sd-	31-01-2001	
SSE/D		SME/BD
③	10/2020	
NOTE-2 ADDED.		
SSE/D		SME/DI

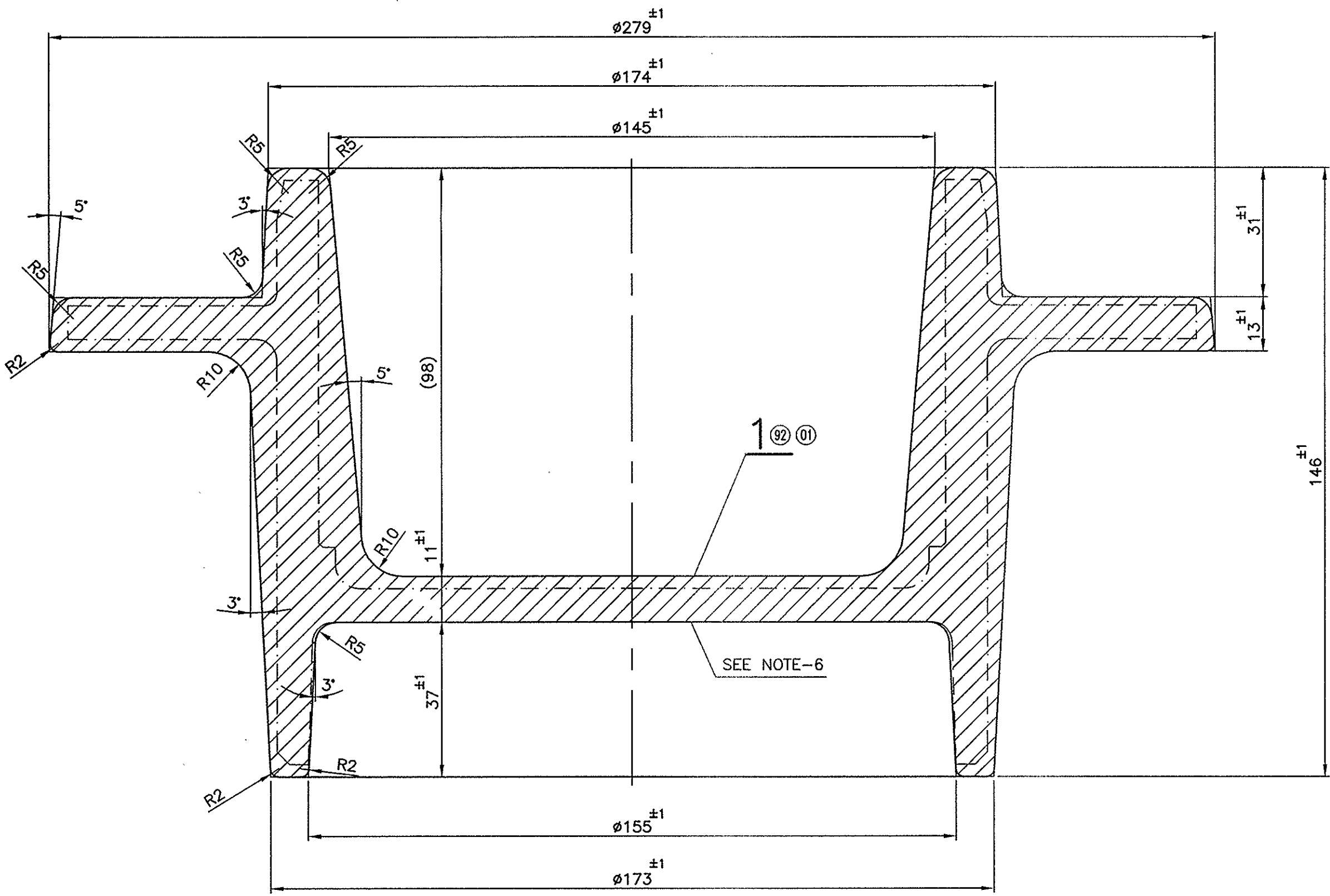
NOTE:

1. TOLERANCE MENTIONED HERE ARE APPLICABLE WHEREVER SPECIFIC TOLERANCES ARE NOT INDICATED IN THE DRAWINGS.
2. THIS DRAWING COVERS THE GENERAL TOLERANCES REQUIREMENTS OF EN 15085.

ASSEMBLY DRAWINGS				DATA CODE NO. 140		INDIAN RAILWAY STANDARDS		SHEET 1 OF 1		ICF/STD-9-0-001	
28-10-2020											
0	Num.	Alt.	DATE OF LATEST ALT	DATE OF FIRST ISSUE	AME/SME						

QTY	DESCRIPTION & DIMENSION	ITEM	REF.DRGS	MAT.SPEC	WEIGHT/UNIT	REMARKS
1	GROUP:					SUPERSEDED BY:
						SUPERSEDES: ICF/STD-9-0-001 Alt.a/-
						SCALE SSE/D
						CHD
						ALTD
						DRN
						Alpha Alt:- c
						INTEGRAL COACH FACTORY CHENNAI-38

▽ ROUGH MACHINED	⑪ ROUGH CLEANING	ALTERATIONS
▽▽ FINISH MACHINED	⑫ CHAMFERED	
▽▽▽ FINE FINISH MACHINED	⑬ BURRS REMOVED	
	⑭ DIE FORGED	
		① 04/2009 DESIGN OF SPRING SEAT, NOTE-2 AND RM SIZE REVISED. NOTE-3 TO 6 ADDED. -Sd- 05-05-2009 SSE/D Dy.CME/SPV
		② 03/2012 NOTE-2 DELETED. ASSY. DRG. NO. EMU/M-0-1-020 ADDED. TOL. ±1 ADDED ON DIM. 30. -Sd- 28-03-2012 SSE/D AME/D
		③ 02/2013 DESIGN OF ITEM-1 REVISED AND WEIGHT/UNIT ALTERED ACCORDINGLY. -Sd- 18-02-2012 SSE/D AME/D
		④ 01/2014 " HARDNESS VALUE 120-130 BHN " IN NOTE-3 DELETED. IN MAT. SPEC. YEAR 92 ADDED. SSE/D AME/D





NOTE:

- 1. ALL SHARP CORNERS SHOULD BE ROUNDED OFF.
- 2.
- 3. FORGED LOWER SPRING SEAT SHALL BE NORMALISED SO AS TO OBTAIN GRAIN SIZE OF ASTM 6 - 8. THERE SHOULD NOT BE ANY DISTORTION AFTER THE PROCESS OF NORMALISING.
- 4. NORMALISED LOWER SPRING SEAT SHALL BE GRIT BLASTED TO REMOVE SCALES ETC.
- 5. FOR FINISH MACHINING, REFER DRG. No. EMU/M-0-1-020/ITEM-1.
- 6. SHALL BE PUNCHED IN 6mm HIGH LETTERS AS GIVEN BELOW.
 - (i) DRAWING No.
 - (ii) MANUFACTURER'S INITIAL
 - (iii) MONTH & YEAR OF MANUFACTURE
 - (iv) BATCH No.

© ALL TYPES OF 20t AXLE BOGIES.

IES.

		16		SPRING SEAT		1		IS:1875-92 CL-2		15 kg approx		FROM Ø140x150 APPROX					
QTY		DESCRIPTION & DIMENSION				ITEM		REF.DRGS		MAT.SPEC		WEIGHT/UNIT		REMARKS			
2		1		GROUP: 0-1													
		PER COACH		LOWER SPRING SEAT AS FORGED										SUPERSEDED BY: SUPERSEDES:ICF/J&T/SK/FORGE-0-1-219 ALT c/-			
														SCALE		SSE/D M. Subapathy	
														1:1		CHD	
																ALTD S.N.Karthikeyan	
																DRN R.Muralidar	
														Alpha Alt:- d			
																INTEGRAL COACH FACTORY CHENNAI-38	
				DATA CODE NO.		INDIAN RAILWAY STANDARDS						SHEET		ICF/J&T/SK/FORGE-0-1-219			
				246								1 OF 1					
		0		Nurn. Alt.		DATE OF LATEST ALT		DATE OF FIRST ISSUE		AME/SME							
						06-01-2014		08-01-2002									
				EMU/M-0-1-020 ASSEMBLY DRAWINGS													