

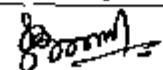


USED ON		ZONE	ITEM NO	DRAWING NUMBER	D S CAT NUMBER	DESCRIPTION	QTY	REMARKS
Cb 322-15-9				Cb.322-10-9		4 <sup>TH</sup> RH CYLINDER		
				ITEM LIST		TUBE ASSY.		
			1	322-17		SWIVEL ELBOW.	1	Tropical make
			2	322-18		SWIVEL ELBOW	1	Tropical make
			3	322-30-9		4 <sup>TH</sup> RH CYLINDER TUBE	1	
I/L CREATED BASED ON RUSSIAN ORIGINAL ISSUE - 3								
F-4 163/253		ISSUE	DATE	NATURE OF AMENDMENTS		ISSUE	DATE	NATURE OF AMENDMENTS
		DRN			CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI.			
		CHD			TITLE : 4 <sup>TH</sup> RH CYLINDER TUBE ASSY.			
		APPD						
		DATE	28.6.07	SHT. NO. 1 OF 1	D S CAT NUMBER	ITEM LIST FOR Cb.322-10-9		

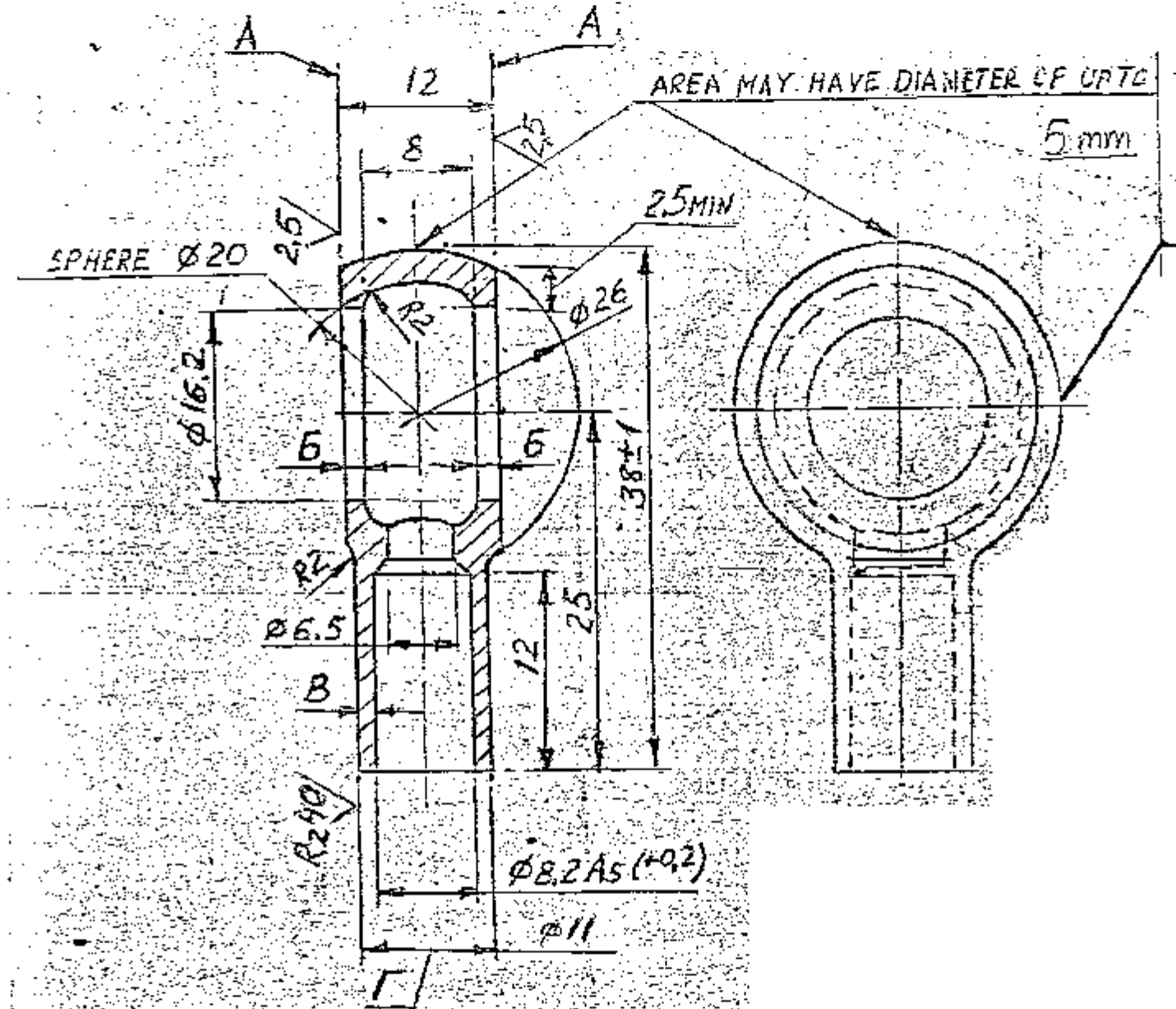


DRAWING NUMBER

322-17

R280 (✓)

ROUGH (✓) CYLINDRICAL SURFACE FROM BOTH SIDES  
4mm max, IN WIDTH IS PERMITTED.



- ALTERNATE MATERIAL IS STEEL 30, 40 GOST 1050-74.
- UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS :  
FOR HOLES - AS PER A7  
FOR SHAFTS - AS PER B7  
FOR OTHERS - AS PER CM7
- WALL THICKNESS DIFFERENCE B SHOULD NOT EXCEED 0.2mm.
- TOLERANCE ON PARALLELISM OF PLANES A SHOULD BE 0.05mm.
- TOTAL TOLERANCE ON ALIGNMENT AND INTERSECTION OF AXIS OF SURFACE I WITH RESPECT TO AXIS OF PLANES A SHOULD BE R 0.3mm OVER THE LENGTH OF CYLINDRICAL PORTION.
- THICKNESS OF WALL B MAY BE ATLEAST 1.5mm.
- USED FOR PARTS, DELIVERED AS SPARE-PARTS IS COATING: ZINC PLATED 6 MICRONS THICK, OILED, WITH REMOVAL OF HYDROGEN EMBRITTLEMENT.
- USED FOR TROPICAL VERSION IS COATING: CADMIUM-PLATED 9 MICRONS THICK, OILED, WITH REMOVAL OF HYDROGEN EMBRITTLEMENT.
- INTERNAL SURFACE MAY HAVE NO COATING.
- MARK AND STAMP FINAL ACCEPTANCE ON THE TAG (PART 540-551) FOR BATCH OF PARTS AND SEAL.

**EXPLANATORY NOTE :-**

- MATERIAL QUOTED : 35 GOST 1050-74.  
Alt Matl Quoted : 30, 40 GOST 1050-74.  
30, 35 & 40 = GRADES OF STEEL.  
a) CHEMICAL COMPOSITION :-

GRADE OF STEEL	CONTENT OF ELEMENTS %								
	C	Si	Mn	Cr	P	S	Cu	Ni	
30	0.27 - 0.35	0.17 - 0.37	0.50 - 0.80	MAXIMUM					
35	0.32 - 0.40	0.17 - 0.37	0.50 - 0.80	0.25	0.035	0.040	0.25	0.25	
40	0.37 - 0.45	0.17 - 0.37	0.50 - 0.80	0.25	0.035	0.040	0.25	0.25	

b) MECHANICAL PROPERTIES :-

GRADE OF STEEL	TENSILE STRENGTH Kgf/mm <sup>2</sup> ( min )	YIELD POINT Kgf/mm <sup>2</sup> ( min )	ELONGATION % ( min )	REDUCTION IN AREA % (min)	IMPACT STRENGTH Kgf.m/cm <sup>2</sup> ( min )
30	50	30	21	50	8
35	54	32	20	45	7
40	58	34	19	45	6

KVD No: 60732

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CB 322-01-4 TO CB 322-12-4  
CB 322-07-4  
CB 20-22-01-4  
CB 20-22-03-4  
CB 20-22-05-5

Ⓐ ALTERNATE MATERIAL: STEEL O80 M40(ENB)  
TO BS: 970 PL 1-1983 OR 35 CA TO IS: 1570

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT. 0.027 Kg TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

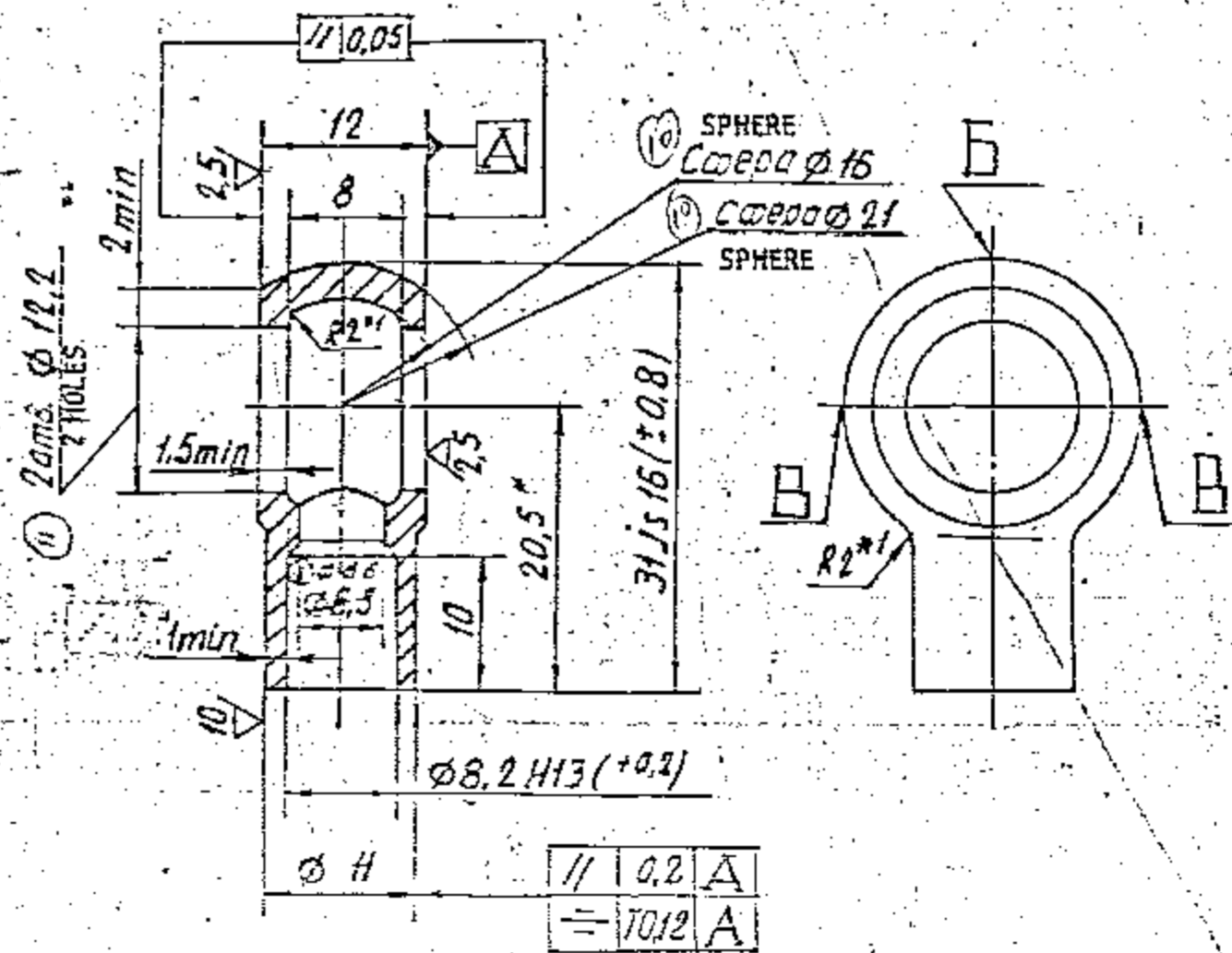
DRN	CHD	TCD	APPD	DATE	SCALE	DIMENSIONS IN mm.	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2102-69	MATERIAL :- 35 GOST 1050-74	USED ON :- ** SEE ABOVE
				22-12-89	2:1			CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) A V A D I	
								TITLE SWIVEL - ELBOW	
								D S CAT NUMBER	DRAWING NUMBER 322-17
ISSUE	DATE	NATURE OF AMENDMENTS							

3rd ALTERATION COMM. MINUTES POINT 6. DATE 27-2-09



DRAWING NUMBER  
322-18

20/ (✓)



1. Неуказанные предельные отклонения размеров отверстий по H14, валов по h7, остальных - ± IT14

2. На поверхностях B допускается чернота шириной 4 мм, не более.

3. В месте Б допускается площадь 0.5 мм, не более.

4. Покрытие ЦБ хр по ИЦД-154 с удалением водородной хрупкости для деталей аттредяемых в зап. части и для комплектования объектов по ИВ-40.

5. Покрытие КД9 хр по ИЦД-104 с удалением водородной хрупкости для деталей в тропическом исполнении. Допускается отсутствие покрытия на внутренних поверхностях.

6. Заменитель материала сталь марок 10, 20 ГОСТ 1050-74.

7. Клеимать на бирке для партии деталей с опломбированием окончательно праченки.

8\* Размеры для справок.

9\* Размеры обеспечить инструментом

- 1) UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS OF HOLES AS PER H14, SHAFTS AS PER H7, OTHER DIMENSIONS - ± IT14
- 2) BLOCK SPOTS NOT EXCEEDING 4mm WIDE ARE ALLOWED ON SURFACES B
- 3) AREA 0.5mm MAXIMUM IS ALLOWED ON PLACE Б
- 4) COATING : Zn 6, CHROMATIZING AS PER ИЦД-154 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT FOR COMPONENT TO BE DISPATCHED AS SPARES AND FOR COMPONENTS MAKING A COMPLETE SET OF ARTICLES AS PER ИВ-40

- 5) COATING : КД9, CHROMATIZING AS PER ИЦД-104 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT FOR COMPONENTS HAVING TROPICALIZED CONSTRUCTION INTERNAL SURFACES MAY HAVE NO COATING
- 6) ALTERNATE MATERIAL : STEEL GRADES 10, 20 ГОСТ 1050-74
- 7) FINAL ACCEPTANCE STAMP SHOULD BE MARKED ON A TAG FOR A BATCH OF COMPONENT AND SHOULD BE SEALED
- 8) \* DIMENSION FOR REFERENCE
- 9) \*1 DIMENSIONS TO BE ENSURED WITH TOOL

ⓑ ALTERNATE MATERIAL: STEEL 080 M40 (EN8) TO BS:970 PL-1-1983 OR 05 C4 TO IS:1570

CB 322-01-4	CB 322-07-4
CB 322-02-4	CB 322-08-4
CB 322-03-4	CB 322-09-4 CB 20-35-12
CB 322-05-4	CB 322-10-4 CB 3335-00-30CB
CB 322-06-4	CB 322-11-4 CB 322-12-4

PILOT SAMPLE SHOULD BE APPROVED BY A R S P BEFORE BULK PRODUCTION.

8	БК 83-267	12	12/88
7	12.87.5111	12	12/88

EST. WT. 0.018 Kg. TO BE STAMPED OR MARKED WHERE INDICATED THIS = (LETTERS)

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE

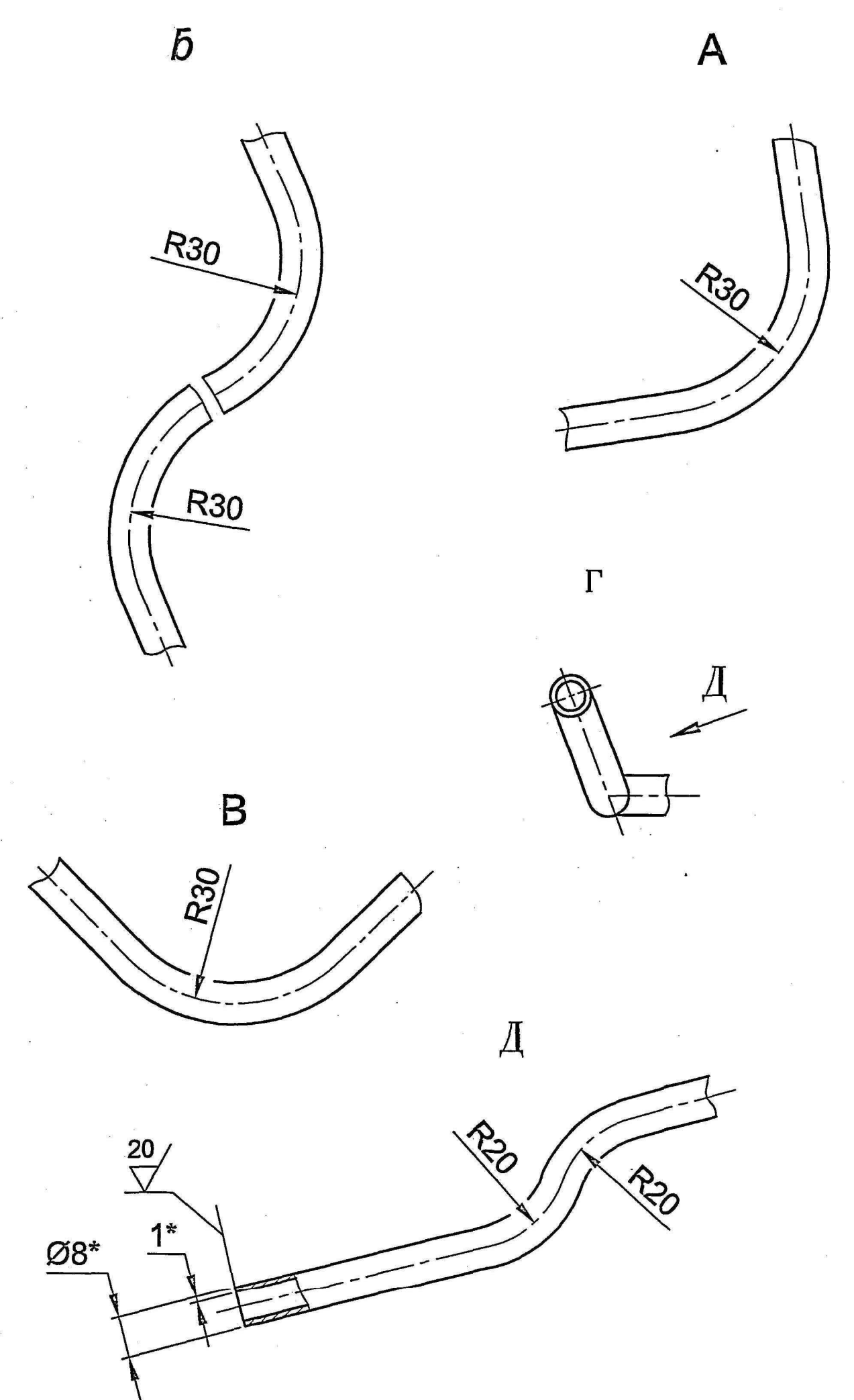
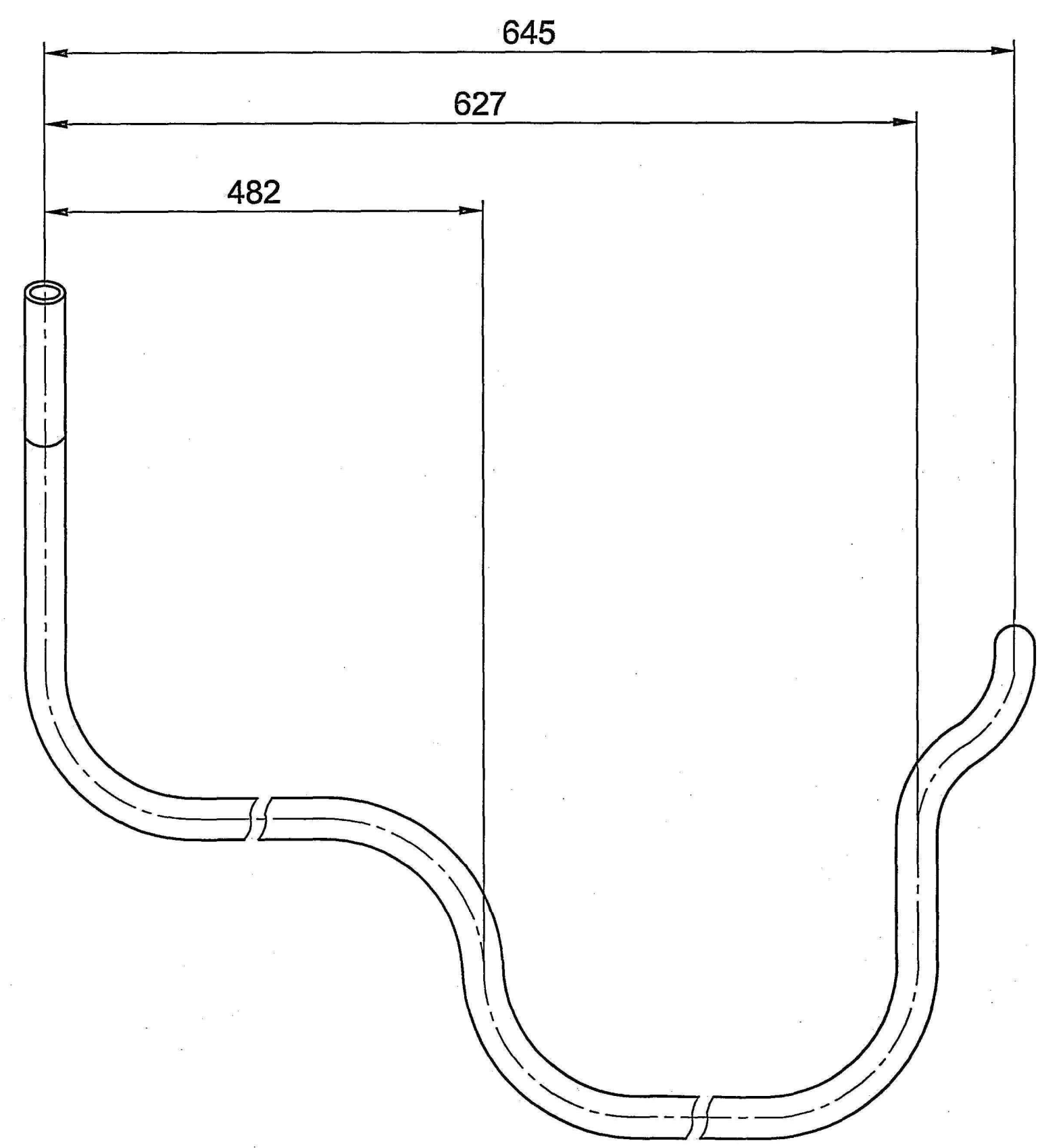
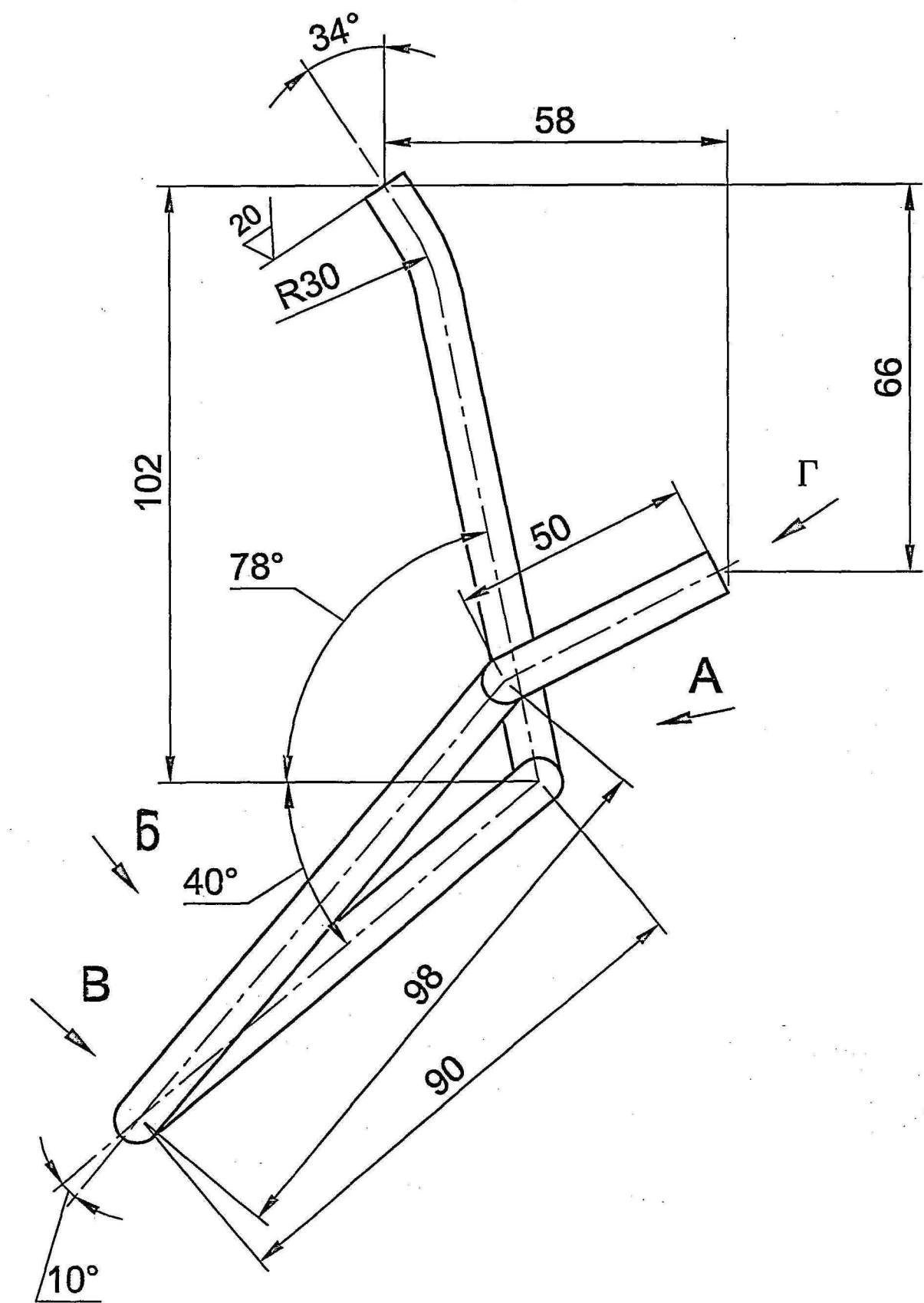
WORK	DATE	MATERIAL	USED ON
12/88	12/88	STEEL 35, GOST 1050-74	SEE ABOVE **
DATE 12-3-88		CONTROLLER OF QUALITY ASSURANCE (HEAVY VENTLES) AVADI	
SCALE - 2:1		DIMENSIONS IN mm	
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 2102-69		TITLE SWIVEL ELBOW	
3rd ALTERATION COMM. MINUTES B 11-7-09 POINT 6, DATE 27-2-09		D S CAT NUMBER	
A 11-2-97 AUTHY NOTN. No. BK 86-41		DRAWING NUMBER 322-18	
ISSUE	DATE	NATURE OF AMENDMENTS	

DRG. INDIVANISED BASED ON RUSSIAN ORIGINAL ISSUE NO. 0 (BK 03-265)



DRAWING NUMBER  
322-30-9

✓(✓)



1. Unfolded length of pipe should be L ≈ 900 mm.
2. Tolerance of ovality for pipe in bending areas should be 0.8mm (semi difference of diameters).
3. Bending-tool marks are allowed.
4. \* Dimensions are given for reference.

DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 1

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

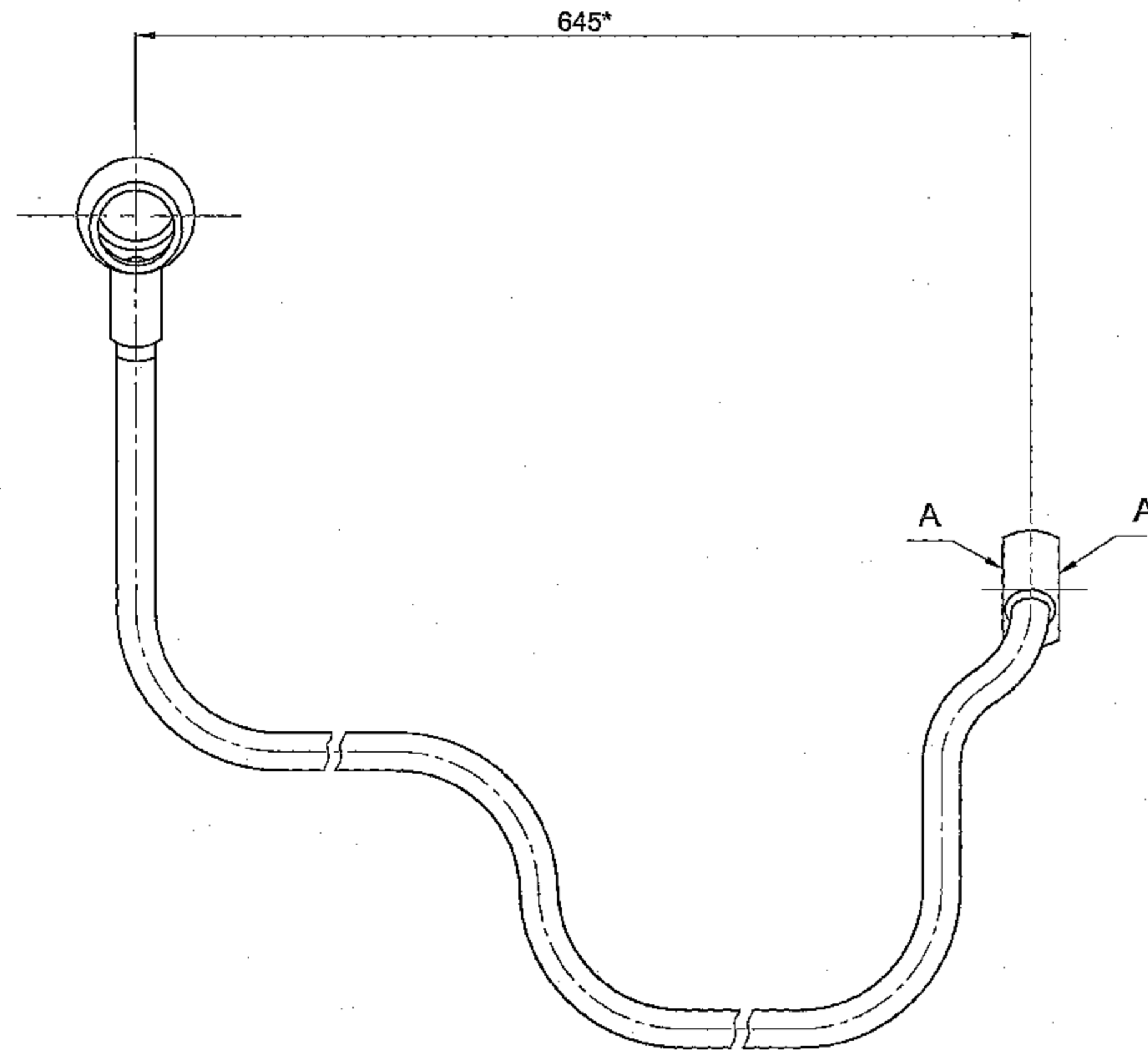
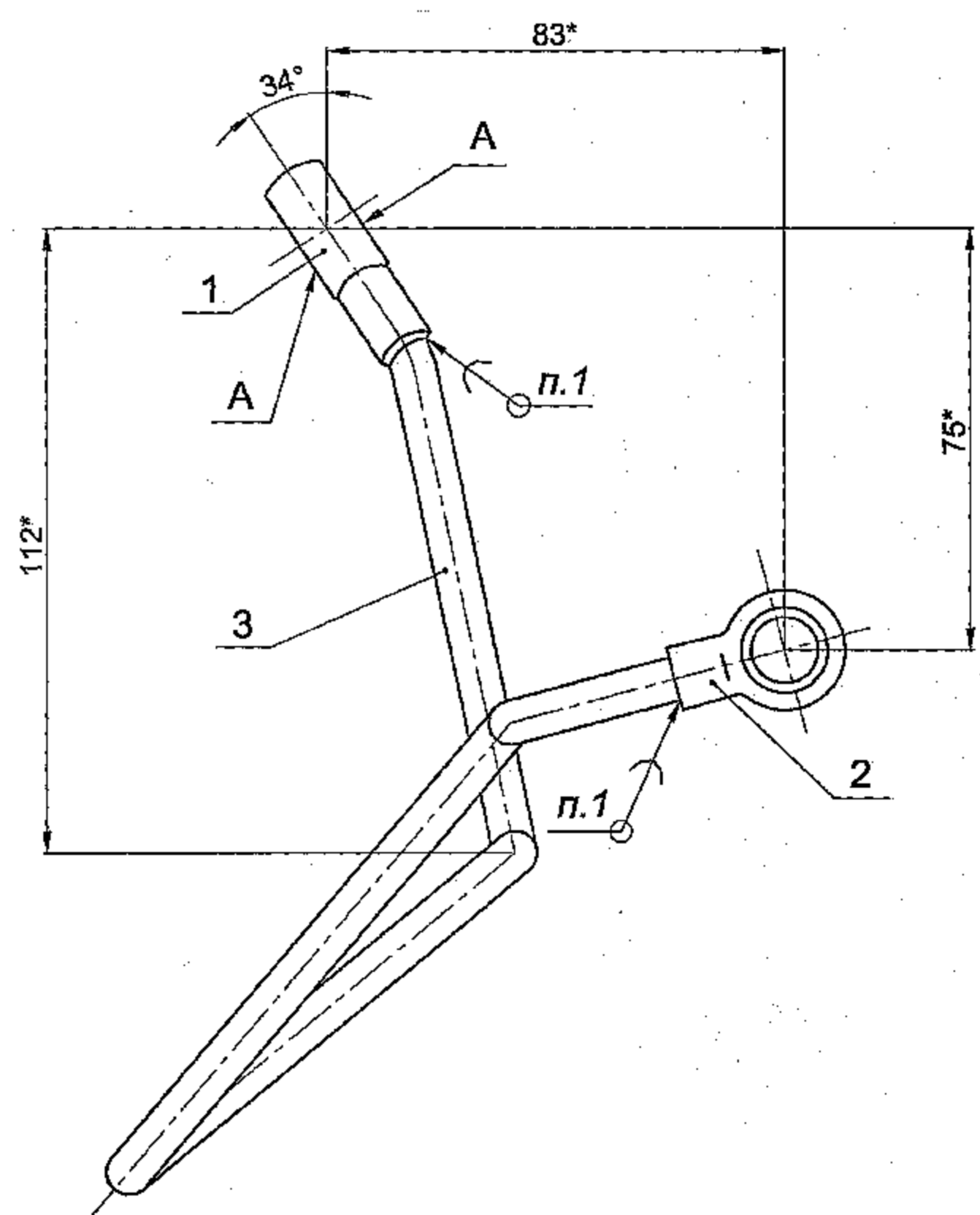
EST. WT. (Kg) 0.160 TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS)

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	CHD	APPD	DATE	SCALE:-	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER
			22/1/07	1:1					322-30-9
				MATERIAL :- PIPE 8x1-20A TY 14-3-480-76		USED ON :- C5 322-10-9		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
				TITLE :-		4 th RH CYLINDER PIPE			
				ISSUE		DATE		NATURE OF AMENDMENTS	

F-4  
184  
253  
SIZE A1

DRAWING NUMBER  
**Cb.322-10-9**



1. Wire П163 Gost 12920-67.
2. Varnish coating ГФ - 95 as per ВП-628-86.
3. On surface "A" sag and overflow of varnish are not allowed, but dressing them with subsequent coating with enamel HL-5123-Red-Sinamen Gost 7462-73 is permitted.
4. Check the pipe as per dummy in the assembly unit cb.322-15-9.
5. Before coating carryout the test for air tightness with air in water under pressure  $(0.4 \pm 0.1)$  MPa  $((4 \pm 1)$  Kgf/cm<sup>2</sup>). Air - leakage is not allowed.
6. After coating carry out the test for airtightness with diesel fuel under pressure  $(9.5 \pm 0.5)$  MPa  $((95 \pm 5)$  Kgf/cm<sup>2</sup>) for a period of minimum 2 minutes. Leakage of fuel is not permitted. Check selectively minimum 10 % of pipes.
7. \* Dimensions are given for reference.

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT.(kg) <b>0.205</b>	TO BE STAMPED OR MARKED WHERE INDICATED THIS # ( LETTERS )
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ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	CHD	APPD	DATE	SCALE: 1:1	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69	ALL THREADS TO CONFORM TO	ISSUE	DATE	NATURE OF AMENDMENTS	MATERIAL :-	USED ON :- Cb 322-15-9	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	TITLE :- 4 th RIGHT HAND CYLINDER TUBE ASSY	D S CAT NUMBER	DRAWING NUMBER <b>Cb.322-10-9</b>
			16/11/09					4A	13.08.08	D.O.CORRECTION						

DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 4

F4  
164  
293  
SIZE A2

