



- 1 INSPECTION GROUP IV AS PER TECHNICAL REQUIREMENTS TT-11 HRC 40 TO 47
- 2 \* G = 8200 KGF/mm<sup>2</sup>
- 3 \* E = 21000 Kgf/mm<sup>2</sup>
- 4 \* ε<sub>s</sub> = 56 Kgf/mm<sup>2</sup>
- 5 n = 4.5
- 6 n<sub>1</sub> = 7
- 7 SPRING COILING DIRECTION IS RIGHT-HAND
- 8 r<sub>1c</sub> = 38.5 - 0.05 mm
- 9 r<sub>2c</sub> = 47.5 + 0.05 mm
- 10 RESIDUAL DEFORMATION IS NOT ALLOWED AFTER COMPRESSING THE SPRING TILL THE COILS MEET EACH OTHER
- 11 NON-SQUARENESS AT SURFACES B AND Γ RELATIVE TO THE AXIS OVER LENGTH B SHOULD NOT EXCEED 0.7 mm
- 21 12 ~~NON-FLATNESS OF GROUND SURFACES B AND Γ SHOULD NOT EXCEED 0.2 mm OVER THE LENGTH OF 1/8 OF CIRCUMFERENCE~~
12. NON-FLATNESS OF GROUND SURFACES B AND Γ SHOULD NOT EXCEED 0.2 mm OVER THE LENGTH OF 1/8 OF CIRCUMFERENCE, CHECK UNDER LOAD OF 0.60.....0.74 Kg.
- 21 13 PITCH-VARIATION SHOULD NOT EXCEED 0.4 mm.
- 14 SURFACES B AND Γ SHOULD NOT BE LESS THAN 3/4th OF LENGTH OF COIL
- 15 PERFORM SHOT-BLASTING SURFACES B AND Γ MAY BE GROUND AFTER SHOT-BLASTING
- 16 CHECK THE PART BY USING A MAGNETIC FLAW DETECTOR PERFORM ACCEPTANCE AS SPECIFIED INSTRUCTIONS UB-20-70
- 17 COATING VARNISH Γ Φ-95 BROWN, GOST 8018-70 IV C<sub>1</sub> NO COATING IS ALLOWED AT POINTS WHERE THE BEARING COILS COME IN CONTACT WITH EACH OTHER
- 18 APPLY STAMP ONTO THE TAG (PART 540-551) BATCH OF PARTS AND SEAL.
- 19 \* DIMENSIONS AND PARAMETERS ARE GIVEN FOR REFERENCE

**EXPLANATORY NOTE**

REFERENCE MATERIAL QUOTED

ALLOY STEEL SPRING WIRE GRADE 51X ΦA WITH SPECIAL SURFACE FINISH POLISHED GROUP "A" OF HIGHER ACCURACY "Π" FOR COLD SPRING COILING "XH" WITH DIAMETER OF 4.0 (+0.03 / -0.02) mm TO GOST 14963-78 AND MANUFACTURED IN ACCORDANCE WITH ALLOY STEEL GRADE 51X ΦA TO GOST 14959-79

a) CHEMICAL COMPOSITION AS PER GOST 14959-79

GRADE OF STEEL	CONTENTS OF ELEMENT %						
	C	Si	Mn	Cr	V	P	S
51 X ΦA	0.47	0.15	0.30	0.75	0.15	0.025	0.025
	0.55	0.30	0.60	1.10	0.25		

b) MECHANICAL PROPERTIES AS PER GOST 14963-78

ULTIMATE RUPTURE STRENGTH Kgf/mm<sup>2</sup> MIN ----- 105  
REDUCTION IN AREA % MIN ----- 40

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

EST. WT. (Kg) 0.09 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

21A\* ALTERNATE MATERIAL:-  
WIRE GRADE OTEVA 70 SC (OR)  
GRADE VDSiCr TO IS- 4454 (Pt.-2)-2001

DRN	Sd/=	MATERIAL:-	USED ON:-
CHD	Sd/=	WIRE 51 X ΦA *	Cb 20-06-12-6
APPD	Sd/=	A-Π-XH 4 GOST 14963-78	
DATE		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
		AVADI	
	SCALE:- 1 1		
	DIMENSIONS IN mm		
	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69		
21A	11-02-08	AUTHY-ALT COM. MEET MINUTES	TITLE:- <b>LARGE VALVE SPRING</b>
21	14.7.89	POINT No. 31 Dt. - 18-12-07	
20	14.7.89	NOTN.No 503-86	D S CAT NUMBER
ISSUE	DATE	NOTN.No 825-83	
	NATURE OF AMENDMENTS		DRAWING NUMBER
			20-06-65

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