



QM-C-8.1/RUBBER/0016/A
Inspection Plan(Check Sheet)

Item: Side Bearer (secondary rubber spring for locomotives)
Specn. : VL-03, Rev. 2 of August 2017
Amd.: Nil
Drg. No. & Alt.: SKVL-127, Alt.-11

1. Firm's Name:

2. Date (Period) of Inspection:

3. Contract Details:
 - a. Contract no. and date.

 - b. Order placing authority.

 - c. Specification no.

 - d. Drawing no.

4. Quantity on Ordered

5. Quantity offered for inspection
On date

6. Consigns

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Inspecting Official of RDSO



SUMMARY

Lot Size: 50 Nos.

Sr no.	Parameters	Specified value	Observation	
			Max.	Min.
	Visual check	Rubber shall be smooth and free from Pinholes, bristles and other Manufacturing flaws & marking.		
7.2	Dimensional check	As per Drawings		
7.3	Physical properties			
Before ageing	Tensile strength elongation at break hardness Shore 'A' compression set	210 kg/cm ² (Min) 450% (Min) 50-60 20%at 70±1°C for 24 +0/-2 hrs.		
After ageing change	Variation in Tensile strength Variation in elongation at break Variation in hardness	±20% +5/-20% +7,-0 ⁰ shore A		
7.4	Compressive load deflection	Other locomotives except WDP1 (in mm)	WDP1 class of locomotives (in mm)	
a.	At 7.5 t	12.5 ± 10% (11.25-13.75)	14.00 ± 10%(12.60-15.40)	
b.	At 11.0 t	17.0 ± 10%(15.30 – 18.70)	19.00 ± 10%(17.10 – 20.90)	
c.	At 16.0 t	23.0 ± 10%(20.70 – 25.30)	26.00 ± 10%(23.40 – 28.60)	
7.5	Shear load deflection test	Other than WDP1 locomotives (In mm)	WDP1 class of locomotives (In mm)	
a)	At 2.00 t	25 ± 15%(21.25-28.75)	30 ± 15% (25.50-34.50)	
b)	At 4.00 t	56 ± 15%(47.60 – 64.40)	66 ± 15% (56.10 – 75.90)	
7.6	Shear Bond Strength	35 kg/cm ²		
7.7	Metal plate inspection	No sharp edges & burrs		
7.8	fatigue	1 million cycle		
7.9	Marking	Drawing, specification no, manufacturer's code, month, year, serial no/batch no.		
8.0	Ash Content	8 % Max		
9.0	Specific Gravity	1.22 Max		

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7.1 Visual checks

Specified sample size:-2 nos **Actual sample size:-**

Pad no.	1	2
Visual check		

7.2 Dimensional check :(As per RDSO Drawings)

Specified sample size:-2 nos. **Actual sample size:-**

Pad no.	1	2
Dimension Check		

7.3 Physical properties (Before Ageing)

Specified sample size: 2 nos. **Actual sample size:**

A Tensile Strength :-

Parameter	Specified Value	1			2		
		a	b	c	a	b	c
Thickness							
Width							
Area							
Load at break							
Tensile Strength	210 kg/cm ² Min.						
Mid Value							

B. Elongation at Break

Parameter	Specified Value	1			2		
		a	b	c	a	b	c
Bench Mark							
Length at break							
Elongation at break	450% Min.						
Mid Value							

C Hardness (Shore A):-

Parameters	Spec. value (mm)	1			2		
Hardness	50-60 Shore A						
Average							

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Physical Properties (After Ageing) : Ageing at $70 \pm 1^{\circ}\text{C}$ for 72 hrs.

A.1 Tensile Strength

Parameter	Specified Value	1			2		
		a	b	c	a	b	c
Thickness							
Width							
Area							
Load at break							
Tensile Strength							
Mid Value							
Variation	$\pm 20\%$						

B.1 Elongation at Break

Parameter	Specified Value	1			2		
		a	b	c	a	b	c
Bench Mark							
Length at break							
Elongation at break							
Mid Value							
Variation	$+5/-20\%$						

C Hardness:

Parameters	Spec. value (mm)	1			2		
Hardness							
Average							
Change in Hardness	$+7/-0$						

D Compression Set (at $70 \pm 1^{\circ}\text{C}$ for 24 $+0/-2$ hrs.) :-

Parameters	Specified Values	1			2		
		a	b	c	a	b	c
Initial Thick.							
Spacer Thick.							
Final Thick.							
Compression Set	Max. 20%						
Avg. Value							

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7.4 Compressive Load Deflection Test

Specified sample size: 2nos.

Actual sample size:-

Load in Tones	Specified			
	Other locomotives except WDP1 (in mm)	WDP1 class of locomotives (in mm)	1	2
7.50	12.5 ± 10%	14.00 ± 10%		
11.00	17.0 ± 10%	19.00 ± 10%		
16.00	23.0 ± 10%	26.00 ± 10%		

7.5 Shear Load Deflection Test

Specified Sample Size: 2 Nos.

Actual sample size:-

Load in Tones	Specified			
	Other locomotives except WDP1 (in mm)	WDP1 class of locomotives (in mm)	1	2
2.0	25.0 ± 15%	30.00 ± 15%		
4.0	56.0 ± 15%	66.00 ± 15%		

7.6 Shear Bond Test:

Specified Sample Size: 2 Nos.

Actual sample size:-

Specified value	35 kg/cm. ²	Value observed		
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7.7 Metal Plate Examination

Specified Sample Size: 1 pad

Actual Sample Size:

parameter	Specified	1
Metal plate examination	Sharp Edges & Burrs	

7.8 Fatigue Test: Done Date.....

At 1 million cycle	Ok / Not Ok	
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7.9 Marking

As per RDSO Drawings	Ok/ Not Ok	
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8.0 Ash Content:-

Specified Sample Size – 2 Nos.

Actual Sample Size –

Parameters	Specified Value	1	2
Wt. of crucible (in gms.)			
Wt. of crucible + sample (in gms)			
Wt. of sample			
Wt. of crucible + Ash (in gms)			
Wt. of Ash			
% Ash	8% Max.		

9.0 Specific Gravity:-

Specified Sample Size – 2 Nos.

Actual Sample Size –

Parameters	Specified Value	1	2
Specific Gravity	1.22 Max.		

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