



QM-C-7.1/RUBBER/0016
Inspection Plan(Check Sheet)

Item: Side Bearer (secondary rubber spring for locomotives)
Specn. : VL-02, Rev. 1 of Feb'2003
Amd.: Nil
Drg. No. & Alt.: SKVL-133, Alt.-9

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

Quality Control Manager of M/s

Inspecting Official of RDSO



SUMMARY

Lot Size: 50 Nos.

Sr no.	Parameters	Specified value	Observation	
			Max.	Min.
7.1	Visual check	Foreign materials, pin holes, cracks & trapped air bristles etc. & marking.		
7.2	Dimensional check	As per Drawings		
7.3	Physical properties			
Before ageing	Tensile strength elongation @ break hardness [IRHD] compression set	210 kg/cm ² 450% 50-60 20%at 70±1°C for 24 +0/-2 hrs.		
After ageing change	Tensile strength elongation @ break hardness	±20% +5/-20% +7,-0° shore A		
7.4	Compressive load deflection test			
a)	At 7.5t	10.5 ± 1.05 mm		
b)	At 8.5t	11.8 ± 1.18 mm		
c)	At 11.0t	14.4 ± 1.44 mm		
d)	At 12.5t	16.0 ± 1.6 mm		
e)	At 18.0t	21.0 ± 2.5 mm		
7.5	Shear load deflection test			
a)	At 2.00t	22 ± 04.4 mm		
b)	At 4.00t	50 ± 10.0 mm		
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		

Quality Control Manager of M/s

Inspecting Official of RDSO



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							

Quality Control Manager of M/s

Inspecting Official of RDSO



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							

Quality Control Manager of M/s

Inspecting Official of RDSO



7.4 Compressive Load Deflection Test

Specified sample size: 2nos.

Actual sample size:-

Load in Tones	Specified	Deflection in mm	
		1	2
7.50	10.5±10%		
8.50	11.8±10%		
11.00	14.4±10%		
12.50	16.0±10%		
18.00	21.0±12%		

7.5 Shear Load Deflection Test

Specified Sample Size: 2 Nos.

Actual sample size:-

Load in Tones	Specified	Deflection in mm	
		Set 1	
2.00	22.0±20%		
4.00	50.0±20%		

7.6 Shear Bond Test:

Specified Sample Size: 2 Nos.

Actual sample size:-

Specified value	35 kg/cm.²	Value observed		
-----------------	------------------------------	----------------	--	--

7.7 Metal Plate Examination

Specified Sample Size: 1 pad

Actual Sample Size:

parameter	Specified	1
Metal plate examination	Sharp Edges & Burrs	

Quality Control Manager of M/s

Inspecting Official of RDSO



7.8 Fatigue Test: Done Date.....

At 1 million cycle	Ok / Not Ok	
--------------------	-------------	--

7.9 Marking

As per RDSO Drawings	Ok/ Not Ok	
----------------------	------------	--

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.		

Quality Control Manager of M/s

Inspecting Official of RDSO