
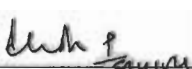

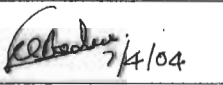


**GOVERNMENT OF INDIA
(Ministry of Railways)**

**SPECIFICATION FOR
ALMEN 'C' STRIP
(PL No.72980011)**

Issued by

**MECHANICAL DRAWING OFFICE
RAIL WHEEL FACTORY
YELAHANKA, BANGALORE-560 064
INDIA**

			
CME	CWE/Mfg	Dy. CME/Mfg	SSE/D
APPROVED	REVIEWED	VERIFIED	PREPARED

SPECIFICATION FOR ALMEN 'C' STRIP**1.0 SCOPE:**

The Specification covers the General description, job requirements, technical requirements and inspection norms of Almen 'C' Strips for supply to Rail Wheel Factory, Yelahanka, Bangalore - 560 064, Karnataka State, India as per the instructions and conditions of contract and tender papers.

2.0 GENERAL DESCRIPTION:

2.1 Almen 'C' Strips are steel strips of standard dimensions according to the details given in fig.1 (under 'c' IS:7001/1989).

3.0 JOB REQUIREMENTS:

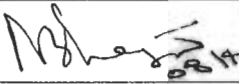
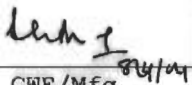
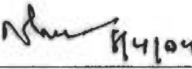
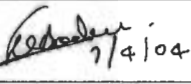
3.1 Railway cast wheels are shot peened in roto blast machines by using steel shots to induce surface compressive stresses for improving resistance to fatigue and stress corrosion cracking. The peening intensity is required to produce an average arc height of not less than 0.2 mm (0.008 inch) on the wheel. Almen 'C' strips, fitted on the front plate (near hub fillet) and back plate (near rim fillet) of a standard design wheel and back plate (hub fillet) and front plate (rim fillet) on a reverse plate design wheel, is used as a means of duplicating the peening intensity that has already been established on the cast wheel.

4.0 TECHNICAL REQUIREMENTS:**4.1 MATERIAL:**

Carbon Steel grade 75 C6 of IS:1570 PART II -1979 or SAE 1070 or EN 42C.

4.2 HEAT TREATMENT:

All the Almen 'C' strips shall be uniformly hardened and tempered at a minimum temperature of 371 °C.

			
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4.3 FINISH & APPEARANCE:

Plain tempered and all burrs removed. No signs of rusting should be seen.

4.4 HARDNESS:

HRC 44 - 50 on both sides of the strips.

4.5 DIMENSIONS:

Almen 'C' strips shall be of standard dimensions as per the fig.1 (under 'c' of fig.3 of IS:7001 -1989)

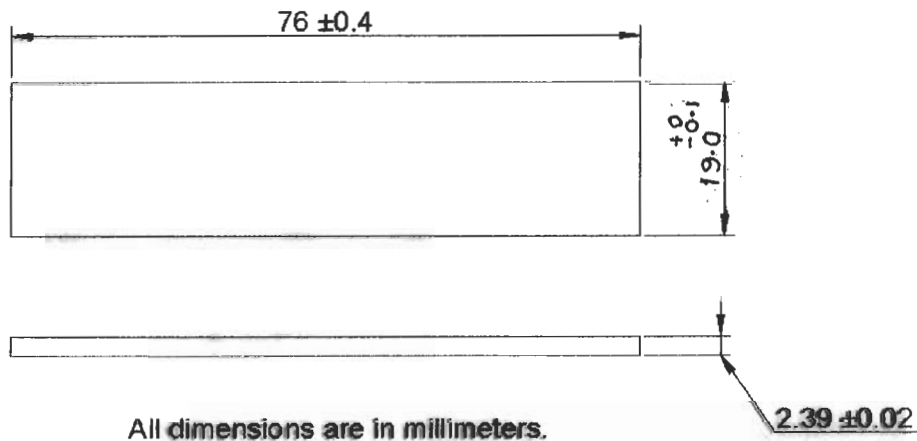
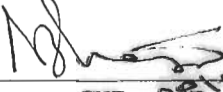
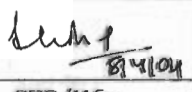
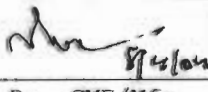
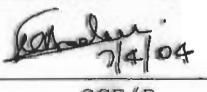


FIG.1

			
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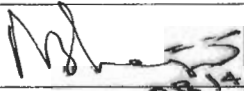
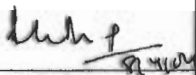
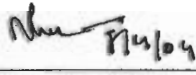
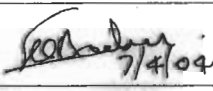
5.0 INSPECTION & ACCEPTANCE NORMS:-

Almen 'C' strips are inspected as per table below:


Sl. No.	Inspection/Test Appearance	Sampling Norms (4 Nos. per lot selected at random)	Acceptance criteria should meet requirement of clause No.4.3
01	Dimension	GIL 1 (Single sampling plan for normal inspection) IS:2500 Pt.I - 2000.	AQL 10
02	Hardness Test (HRC)	4 Nos. per lot, selected at random.	All the samples should meet the requirement of clause 4.4.
03	Chemical Composition	Same four samples of Sl. No. 2 after hardness testing.	All the samples should meet the requirement of clause 4.1.
04	Peening Intensity Test	2 pieces per lot selected at random.	Both strips should produce a deflection range of 0.20 - 0.53 mm after peening for 34 seconds on standard wheel.

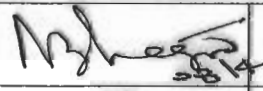
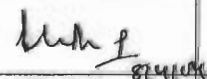
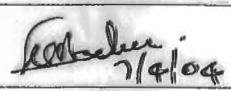
6.0 PACKING:

Almen strips should be wrapped in paper in bundles of 10 strips and bundles should be packed in suitably sized card board boxes.

			
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AMENDMENT SHEET

Alt	Date	Cl. No	Description	Job No	Sign
'i'	27.03.2004	-	Revised and Recast	4525	 27/3/04

			
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