

GOVERNMENT OF INDIA  
(Ministry of Railways)

SPECIFICATION FOR  
GRINDING WHEEL FOR APEX GRINDER  
(PL No. 72980916)

Issued by

MECHANICAL DRAWING OFFICE  
**RAIL WHEEL FACTORY**  
YELAHANKA, BANGALORE-560 064  
I N D I A

<i>Shankar</i>	<i>Shankar</i>	<i>Shankar</i>	<i>Shankar</i>
AWM/WFPS	Dy. CME/Mfg.	CWE/Mfg	CME
Proposed	Verified	Reviewed	Approved

**SPECIFICATION FOR GRINDING WHEEL FOR APEX GRINDER****1.0 SCOPE**

The Specification covers the manufacture, supply and putting into beneficial use of Grinding Wheels for the Apex Grinding Machine which will be supplied at Rail Wheel Factory, Yelahanka, Karnataka State, India as per Instructions and Conditions of contract and Tender Papers.

**2.0 DESCRIPTION**

Straight Grinding Wheels of non-reinforced quality of size 200x25x15.88 mm conforming to A16R5B as per IS 551:1989.

**3.0 JOB REQUIREMENTS**

The Grinding Wheels are attached to the spindle of a Motor of 3 HP, 1500 RPM in the Apex Grinding Machine. When Wheels roll into the Apex Grinder, the Rollers will automatically start causing the Wheel to rotate. At the same time, the Grinding Wheel will start. After attaining the operating speed, the Grinding Wheel is lowered onto the Apex of the Wheel flange. After Grinding the Apex, the Grinding Wheel raises to its home position. The finish required is rough. No coolant is used while grinding.

**3.1 The Chemistry of the Cast Steel Wheels and Physical Properties are given below.**

Carbon	:	0.57% to 0.8%
Manganese	:	0.6% to 0.85%
Phosphorous	:	0.035% Max.
Sulphur	:	0.035% Max.
Silicon	:	0.15% Min.
Hardness	:	255 - 341 BHN.
Tensile Strength	:	70 - 120 kg/mm <sup>2</sup>
Elongation	:	7 - 13%

<i>Shree...</i>	<i>...</i>	<i>...</i>	<i>...</i>
AWM/WFPS	Dy. CME/Mfg.	CWE/Mfg	CME
Proposed	Verified	Reviewed	Approved

**3.2 TECHNICAL DATA OF GRINDING WHEEL**

Outside dia : 200 mm  
 Bore : 15.88 mm.  
 Thickness : 25 mm.  
 R.P.M. : 1500

**4.0 PRODUCT IDENTIFICATION**

- 4.1 The manufacturer/supplier should indicate product marking as per IS:551:1989(Latest) on every grinding wheel at appropriate location.
- 4.2 The manufacturer/supplier should indicate the expiry date for usage on every grinding wheel at prominent location.

**5.0 INSPECTION**

Sampling Plan : As per I.S.2500(Part1):2000, GIL-II  
 Single sampling plan for dimensional check.  
 Acceptance level : AQL 10

**6.0 ACCEPTANCE CRITERIA ON PRACTICAL TEST**

- 6.1 Samples are drawn as per clause 5.0 and fitted to Apex Grinding Machine.
- 6.2 The grinding wheel should be capable of grinding a minimum of 800 BOXN wheels during its service upto 50 mm reduction in radius.

<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
A WM/WFPS	Dy. CME/Mfg.	CWE/Mfg	CME
Proposed	Verified	Reviewed	Approved

**AMENDMENT SHEET**

Alt	Date	Clause No.	Description	Job No.	Sign
'd'	03.05.2005		Specification <b>re-drafted</b> and made in new format replacing WAP with RWF.	4698	<i>[Signature]</i> 6/5/05
		2.0	Clause <b>modified</b> .		
		5.0	Year 2000 <b>added</b> against IS 2500 (Part1)		
		4.0 6.0, 6.1& 6.2	Clause on Acceptance criteria <b>added</b> .		

<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
AWM/WFPS	Dy. CME/Mfg.	CWE/Mfg	CME
Proposed	Verified	Reviewed	Approved