

GOVERNMENT OF INDIA
(Ministry of Railways)

**SPECIFICATION FOR
SCRAP RAILWAY/RAIL ROAD WHEELS**
(PL No. 98113045)

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

Issued by
SSE/D

<i>M. J. ...</i>	<i>(Signature)</i>	<i>12-9-16</i>	<i>(Signature)</i>
CME	CWE/Mfg.	Dy. CME/Mfg.	WM/WP
APPROVED	REVIEWED	VERIFIED	PROPOSED

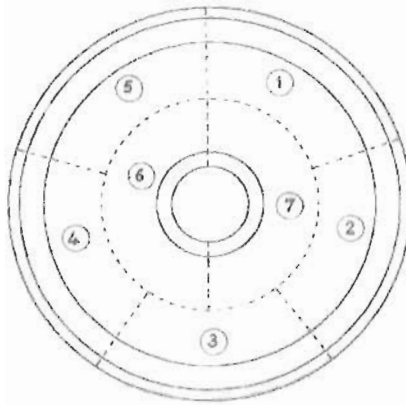
SPECIFICATION FOR SCRAP RAILWAY/RAIL ROAD WHEELS

1.0 PURPOSE AND SCOPE:

The Specification covers supply of scrap / rejected / condemned railway /rail road wheels, cast or forged, to Rail Wheel Factory, Ministry of Railways, Yelahanka, Bangalore - 560 064, India, as per the terms & conditions stipulated in the tender papers, to use as scrap for melting in Electric Arc Furnace for manufacturing cast railway wheels.

2.0 JOB REQUIREMENT:

The scrap wheels are required to be charged into Electric Arc Furnace for making liquid steel to be used in casting Railway wheels. Wheels supplied by the firm will be cut by RWF into smaller pieces generally as shown in the figure 1 and will be used as Heavy Melting Scrap (HMS) for Electric Arc Furnace melting.



----- SCRAP WHEEL TO BE CUT ALONG DOTTED LINE BEFORE CHARGING INTO ELECTRIC ARC FURNACE

Figure 1

<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
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3.0 TECHNICAL DATA

3.1 CHEMICAL COMPOSITION

The Wheels shall conform to the following composition

Carbon	0.45 - 0.80%
Manganese	0.57 - 0.90%
Phosphorus	0.035% max.
Sulphur	0.035% max.
Silicon	0.15% min.

4.0 The scrap wheels shall be free from alloys. Alloys present, if any, shall be residual in nature and shall not be in the form of additives for making alloy steel. The residual elements shall not exceed the following quantities. In addition, the combined residuals shall not exceed 0.60%. Further, the quantity of chromium, nickel and molybdenum put together shall not exceed 0.40%.

Chromium	0.15% max
Nickel	0.25% max
Molybdenum	0.060% max
Vanadium	0.20% max
Copper	0.15% max
Arsenic	0.015% max
Tin	0.010% max
Cobalt	0.008% max
Niobium	0.007% max
Boron	0.001% max
Lead	0.001% max

5.0 The scrap wheels shall be free from dirt, grease, excessive rust and corrosion.

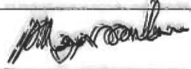

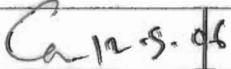
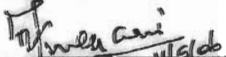
<i>M. J. ...</i>	<i>Chet ...</i>	<i>C. M. G. 06</i>	<i>W. M. W. P. 11/9/06</i>
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5.0 INSPECTION AND TESTING

One random wheel is selected from every batch of 500 MT or part thereof. One test piece is cut from each of the sample and tested spectrographically or as per IS 228. If the samples conform to all the parameters mentioned in clauses 3.0, 4.0 and 5.0, the lot will be accepted. If the samples do not conform to any of the parameters in clauses 3.0, 4.0 and 5.0, two more samples will be drawn from every batch of 500 MT or part thereof and tested as above. If both the samples conform to requirement, then the lot is accepted. Otherwise the lot will be rejected.

6.0 TEST CERTIFICATE:

The manufacturer/supplier shall submit test certificate for conformance of the supplied lot to all the parameters of clauses 3.0, 4.0 and 5.0.

			
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