





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

**SPECIFICATION FOR
HIGH ALUMINA EXPANSILE MORTAR
(PL No.)**

Issued by

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

 26/7	 26/7/12	 26.7.12	 26/7/12
CME	CWE/W	Dy. CME/Mfg	AME/D
APPROVED	REVIEWED	VERIFIED	PROPOSED

Job No.

SPECIFICATION FOR HIGH ALUMINA EXPANSILE MORTAR

1.0 SCOPE

The specification covers the manufacture and supply of High Alumina Expansile Mortar to Rail Wheel Factory, Yelahanka, Bangalore - 560 064, Karnataka State, India as per instructions and conditions of contract.

2.0 DESCRIPTION


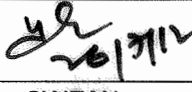
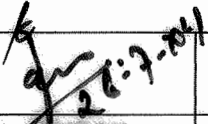
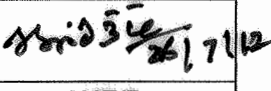
High Alumina expansile Mortar for ladle lining.

3.0 JOB REQUIREMENT

High alumina heat setting expansile mortar is required for the lining of ladle with High Alumina Bricks. The ladle is used to tap molten steel of medium, plain carbon steel at a temperature up to 1710 °C. The same ladle is used for casting Railway wheels through upward pressure pouring technique at a temperature range of 1610-1500 °C, for about 45 – 55 minutes. The mortar is applied between the sidewall brick joints to form steel tight joints so as to prevent the seepage of liquid steel into the joint. Thus the mortar shall have the property of expansion throughout the service temperature range. Manufacturer shall indicate the expansion characteristic and the value achieved while offering the mortar.

4.0 TECHNICAL REQUIREMENTS

- 4.1 Alumina Content (Al_2O_3) : 70% min.
- 4.2 Iron Oxides content (Fe_2O_3) : 2.0% max.
- 4.3 Pyrometric Cone Equivalent : +37 Orton (1820°C)
- 4.4 Expansion characteristic : $\geq +1.0\%$ (at 1500°C / 2hours)
- 4.5 Grading : 95% passing through 150-micron sieve.
- 4.6 Maximum particle size : 0.5 mm

			
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5.0 PACKING

The High Alumina heat setting expansile mortar shall be supplied in polythene lined double walled paper / gunny bags weighing 25 kg each. Manufacturer's name, material name, batch number and date of manufacture shall be marked on the bags. Use eco-friendly biodegradable packing material.

6.0 INSPECTION AND TESING

6.1 QUALITY ASSURANCE PLAN

The supplier shall have a documented Quality Assurance Plan, including the raw material & process control and various tests carried out stage-wise during the manufacture.

6.2 TESTING FACILITIES AND CERTIFICATES

The manufacturer shall have the test facilities for the parameters indicated under Clause 4.0. Batch wise Material Test Certificates shall accompany the supply.

6.3 SAMPLING NORM

As per IS 1528 (Pt.7) : 1974 or latest.


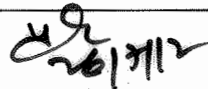
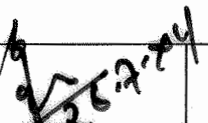

6.4 METHOD OF CHEMICAL ANALYSIS

As per IS 1335 : 1959 or latest.

6.5 The supplier shall provide all facilities for inspection and test of the material for Chemical, Physical and Sieve analysis as mentioned under Clause 4.0.

7.0 SHELF LIFE

Shelf life and storage condition shall be furnished by the supplier in the offer.

			
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