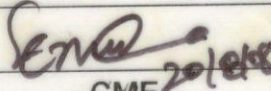
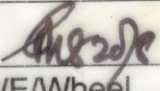

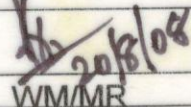


GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS

SPECIFICATION FOR  
MANUFACTURE OF MOULD BOX  
RETAINERS AND RETAINING RINGS  
(MEEHANITE GC 275 (GC40) IRON CASTING)

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

Issued by  
SSE/D

 CME 20/8/08	 CWE/Wheel	 Dy. CME/Mfg	 WMMR
APPROVED BY	REVIEWED BY	CHECKED BY	PREPARED BY

Job No. 5171

**SPECIFICATION FOR MANUFACTURE OF MOULD BOX  
RETAINERS AND RETAINING RINGS  
(MEEHANITE GC 275 (GC40) IRON CASTING)**

**1.0 SCOPE:**

The specification covers the material specification for Mould Box Retainers and Retaining Rings to the latest RWF drawing numbers mentioned below.

1. C/MO-16/72 - 43"(1092.2) Drag Retaining Ring for Graphite Mould Block.
2. C/MO-16/73 - 48"(1219.2) Drag Retaining Ring for Graphite Mould Block.
3. C/MO-16/74 - 43"(1092.2) Cope Retaining Ring for Graphite Mould Block.
4. C/MO-16/75 - 48"(1219.2) Cope Retaining Ring for Graphite Mould Block.
5. C/MO-16/76 - 43"(1092.2) Cope Retainer for Graphite Mould Block.
6. C/MO-16/77 - 48"(1219.2) Cope Retainer for Graphite Mould Block.
7. C/MO-16/78 - 43"(1092.2) Drag Retainer for Graphite Mould Block.
8. C/MO-16/79 - 48"(1219.2) Drag Retainer for Graphite Mould Block.

**2.0 General description:**

Superior quality cast iron with flake graphite in perlitic matrix suitable for general engineering applications combining good strength with low co-efficient of friction and self lubricating properties.

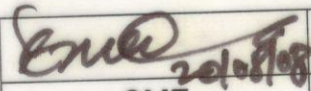
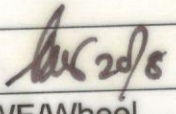
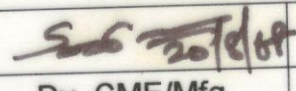
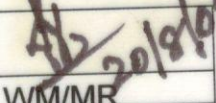
**3.0 JOB REQUIREMENTS:**

(1) The retainers and retainer rings should withstand high temperatures of range 600°C to 900°C without cracking or breaking. They should have resistance to thermal loads of cyclic nature and must be creep-resistant.

(2) The retainers and retainer rings should be capable of withstanding dynamic/shock loads during handling/transit, each mould unit weighing almost 7.5T without chipping off or cracking/breaking.

**4.0 MATERIAL SPECIFICATION:**

MEEHANITE GC 275 (GC40) IRON CASTING.

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JOB No. 5171

i) **Material Chemical Composition (given for guidance).**

(1)	Carbon	:	2.9 – 3.65%
(2)	Silicon	:	1.8 – 2.9%
(3)	Manganese	:	0.5 – 0.7%
(4)	Sulphur	:	0.1% max.
(5)	Phosphorus	:	0.15% max.
(6)	Balance	:	Residual

ii) **Physical Properties:**

Specific Gravity	:	7.25 g/cc.
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iii) **Mechanical Properties:**

Hardness	:	190 BHN min.
Tensile Strength, Ultimate	:	276 Mpa min.
Tensile Strength, Yield	:	100 Mpa min. (0.01% permanent set)
Izod Impact Unnotched	:	16.3 – 27.1 J (0.798" Dia. Bar)

5.0 The suppliers shall furnish the test certificate for the product from the standard approved testing agency.

6.0 **WARRANTY/GUARANTEE:**

6.1 The Tenderer should give a warranty/guarantee on the product supplied to give trouble-free performance as per the requirements stated in Clause 3 of this specification for a period of 18 months from the date of receipt/12 months from the date of commissioning.

7.0 **TESTS AND SPECIMEN:**

7.1 Test specimen plates of 3 mm thick integral with the product are required for inspection of the product.

7.2 The castings should be sound, free from defects like blowholes, laps, non-metallic inclusions etc. Further, no welding or repair is permissible on the casting.

<i>Semer</i> CME APPROVED BY	<i>Aug 20/08</i> CWE/Wheel REVIEWED BY	<i>SS</i> Dy CME/Mfg CHECKED BY	<i>20/8/08</i> WM/MR PREPARED BY JOB No. 5171
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