

ENGINEERING: ENGINEERING SYSTEMS ENABLEMENT QUALITY MANAGEMENT SYSTEM

CUTTING AND FETTLING

OF

BOGIE CENTRE CASTINGS FOR KOEDOESPOORT FOUNDRY

TECHNICAL SPECIFICATION

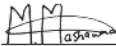
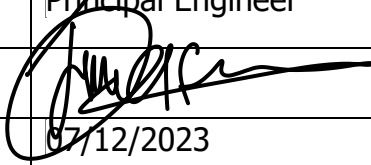
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TABLE OF CONTENTS

1	Document version.....	3
2	Purpose	3
3	Scope of specification.....	3
4	Reference documentation	3
5	Definitions and abbreviations	3
6	Technical requirements	4
7	Quantity.....	5
8	Post purchase support.....	5
9	Documentation required	5
9.1	Procurement stage	5
9.2	On delivery	5
10	Delivery	5
11	Time frame	6
12	Acceptance criteria.....	6
13	Appendices	7

1 DOCUMENT VERSION

This specification supersedes all previous specifications for the cutting and fettling of Bogie Centre castings for the Koedoespoort (KDS) Foundry. |

2 PURPOSE

The purpose of this document is to provide the potential supplier with the minimum technical requirements for the cutting and fettling of Bogie Centre castings for the KDS Foundry. Cutting and fettling of Bogie Centre castings is a KDS foundry process that is conducted for the purpose of removal of unwanted excess metal and any unnecessary metal projections on the surface of a casting. |

3 SCOPE OF SPECIFICATION

This specification applies to the cutting and fettling of Bogie Centre castings produced at KDS Foundry. The cut and fettle do not include the welding repair of the components. Weld repair by the contractor is prohibited unless granted with written permission to do so by Transnet Engineering's Materials and Manufacturing Principal Engineer.

Table 1: Type of Bogie Centre castings produced at the KDS Foundry.

No	Component Description	Material grade	Drawing no	Item no
1	Bogie Centre/48	M201 AAR Grade B	CME68_09087_147	068009071
2	Bogie Centre/57	M201 AAR Grade B	CME68_076527_147_F	068076527

4 REFERENCE DOCUMENTATION

Technical drawing of the Bogie Centre castings, referenced in Table 1 above. |

5 DEFINITIONS AND ABBREVIATIONS

Cutting refers to the removal of risers, gating system, vents, and sprue to remain with the cast component.

Fettling refers to the trimming or clean the rough edges of the excess cast metals within geometrical requirements. |

6 TECHNICAL REQUIREMENTS

The supplier shall receive the Bogie Centre castings as cast (refer to Figure 1-2 on Appendix 1).

6.1 Bogie Centres cutting:

Removal of unnecessary and unwanted material from a casting.

Client requirements:

The supplier shall be required to cut off the runners, risers, gating system, metal flow offs possible flesh and all the other excess material on the Bogie Centre castings (see appendix 2).

Proposed equipment:

Lancing tube, Plasma cutter, cutting torch.

6.2 Bogie Centre castings grinding and dressing:

Removal of undesired material from the surface of a casting through abrasive action.

Client requirements:

The supplier shall be required to grind off the excess material projections mainly on the sections previously cut. This should be done to a required level as per prescribed component drawing.

The supplier must ensure that castings are not overly ground (see Appendix 3).

Proposed equipment:

Grinding big wheel, cup stone grinder, surface and baby grinder, small and big angle grinder, pencil grinders.

NB: Any work done on the casting must be conducted as prescribed and depicted in this technical specification and respective drawing, this is to ensure the maintenance of castings overall quality, structural and dimensional accuracy. Suppliers are prohibited from performing any form of welding on the castings. Damaged castings will be rejected pending an NCR and cost of the component will be recovered from the service provider. The agreement of penalties between parties will be reached during the contractual stage.

6.4 Process requirements

- Visual inspection prior and post processes.
- Sort and categorize components.

- Use of certified and latest issued drawings.
- Use calibrated machinery and equipment.
- Use calibrated and certified gauges.
- Maintain Records of all calibrations.
- Typical Process flow, shown in Appendices. |

7 QUANTITY

KDS Foundry produces an average of 200 Bogie Centre castings per month depending on the demand, however quantities of Bogie Centre castings that need to be cut and fettled shall be indicated as and when required. |

8 POST PURCHASE SUPPORT

- Availability of supplier and his premises for any issues arising.
- Weigh or count, record and return the scrap resulting from the cut and fettling process. The returning consignment i.e castings and scrap must not be less than 15 percent of the collected weight. |

9 DOCUMENTATION REQUIRED

9.1 Procurement stage

- First article inspection components. |

9.2 On delivery

- Job completion and quality check sheet accompanied by a delivery note. |

10 DELIVERY

Upon delivery, the castings shall;

10.1 be stacked and packed in an orderly sequence.

10.2 be stored and transported in a moisture free and dry environment.

10.3 Branded with an identification logo on the casting. (i.e., spray painted with supplier's logo).

10.4 Bogie Centre castings off cut scrap including risers, runners and gating system must be returned to the KDS Foundry. |

Delivery address:

|Transnet Engineering: ESE Foundry office building A16

Mop Road
Opposite Foundry business
Koedoespoort
Pretoria
0186 |

11 TIME FRAME

|Expected lead times as stipulated on the RFQ or tender document.

Supplier is expected to collect castings for cut and fettling on terms indicated on the RFQ or tender document. |

12 ACCEPTANCE CRITERIA

It is the responsibility of the supplier to ensure the understanding of the requirements/technical requirements of a required product or service. It is also the responsibility of the supplier to enquire and seek clarity on areas that may be unclear.

Upon the delivery of a product/service, the product/service shall be evaluated for conformance to specification requirements, using the acceptance criteria stipulated in the tender document.

13. Appendices

Appendix 1: As received Bogie Centre.



Figure 1: Illustrates the bottom view of a typical Bogie Centre as and when received by supplier.



Figure 2: Illustrates the top view of a typical Bogie Centre as and when received by the supplier.

Appendix 2: Cutting



Figure 3: Illustrates the areas and sections to be cut off by Supplier.

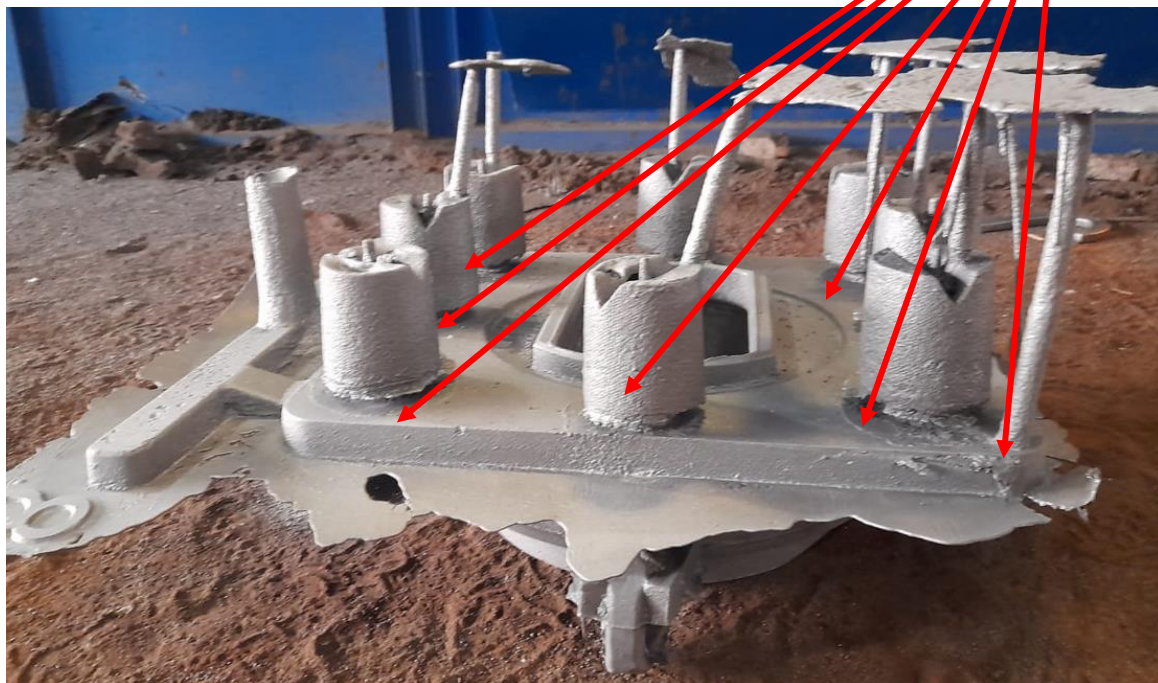


Figure 4 : Illustrates areas and sections to be cut off by the supplier.



Figure 5: Illustrates the Bogie Centre expectations post cutting.

Appendix 3: Fettling (grinding)



Figure 6: Illustrates Bogie Centre expected outlook post grinding and dressing.



Figure 7: Illustrates Bogie Centre expected outlook post grinding and dressing.