

ENGINEERING: ENGINEERING SYSTEMS ENABLEMENT

QUALITY MANAGEMENT SYSTEM

CUTTING AND FETTLING

OF

COUPLER GUIDES FOR KOEDOESPOORT FOUNDRY

TECHNICAL SPECIFICATION

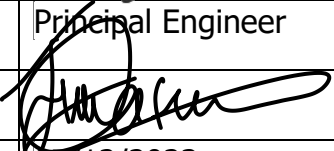
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1 DOCUMENT VERSION

This specification supersedes all previous specifications for the cutting and fettling of Coupler guide 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 Coupler guides for the KDS Foundry. Cutting and fettling of Coupler guides 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 the different types of Coupler guides 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 written permission to do so by Transnet Engineering's Materials and Manufacturing Principal Engineer.

Table 1: Coupler guides produced at the KDS Foundry.

No	Component Description	Material grade	Drawing no	Item no
1	Coupler Guide	M201 AAR Grade B	CME 68/13215-603	068006057

4 REFERENCE DOCUMENTATION

Technical drawing of the Coupler guides 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 castings as illustrated in Appendix 1.

6.1 Coupler guides cutting:

Removal of unnecessary and unwanted material from the 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 Coupler guides (see Appendices 2).

Proposed equipment:

Lancing tube, cutting torch.

6.2 Coupler guides 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 the prescribed component drawing.

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

Proposed equipment:

Big wheel grinder, surface and baby grinder, small and big angle grinder, and 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 a casting's 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.

6.3 Process requirements

- Visual inspection prior and post processes.
- Sort and categorize components.
- Use of certified and latest issued drawings.
- Use calibrated machinery and equipment.
- Maintain Records of all calibrations.

- Follow typical Process flow, shown in Appendices. |

7 QUANTITY

|KDS Foundry produces an average of 200 Coupler guides per month, however, quantities of Coupler guides 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/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

- |N/A |

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 Coupler guides 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

11 TIME FRAME

Expected lead times shall be 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 Coupler guides.



Figure 1: Top view of Coupler guides, as received by supplier.



Figure 2: Bottom view of Coupler guides, as received by supplier.

Appendix 2: Cutting/5

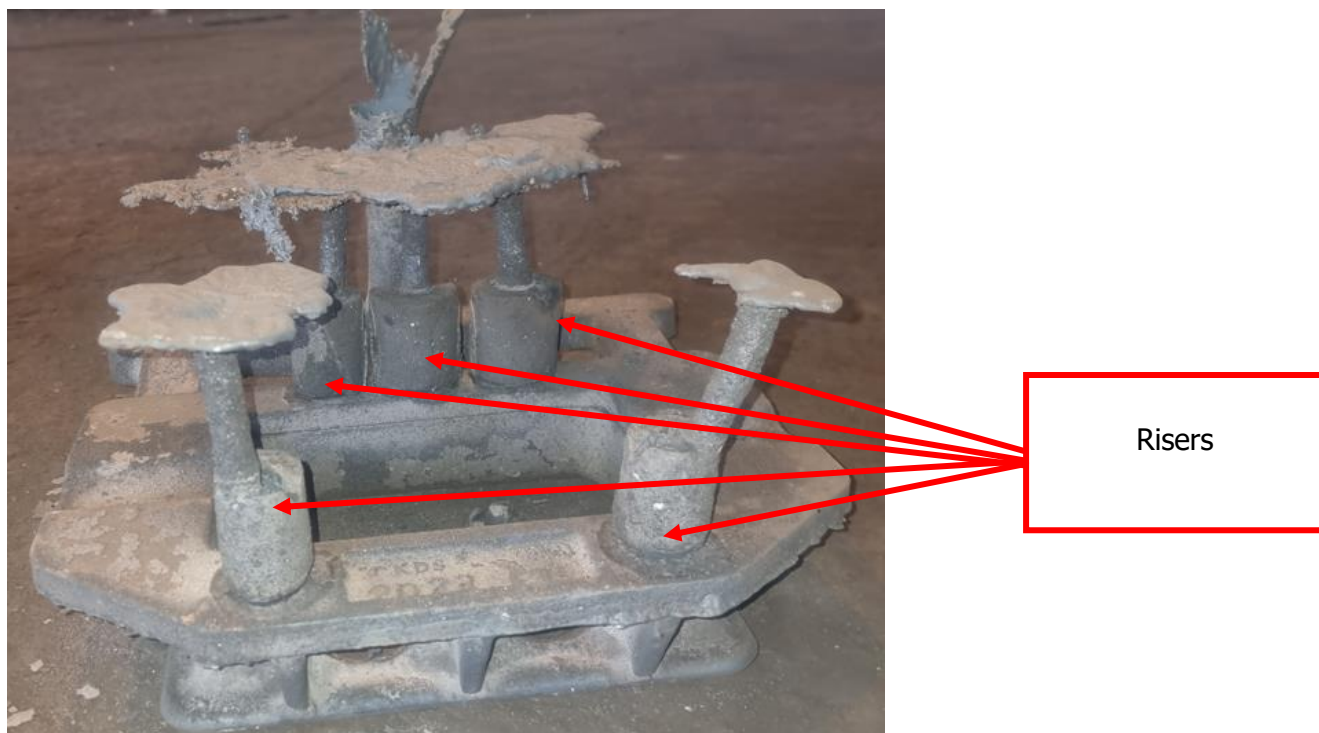


Figure 3: Illustrates the top view of the Coupler guide castings showing relevant sections to be cut off. (NB: Removal of flesh is necessary)



Figure 4: Illustrates the top view of the Coupler guides sections to be cut off by supplier.

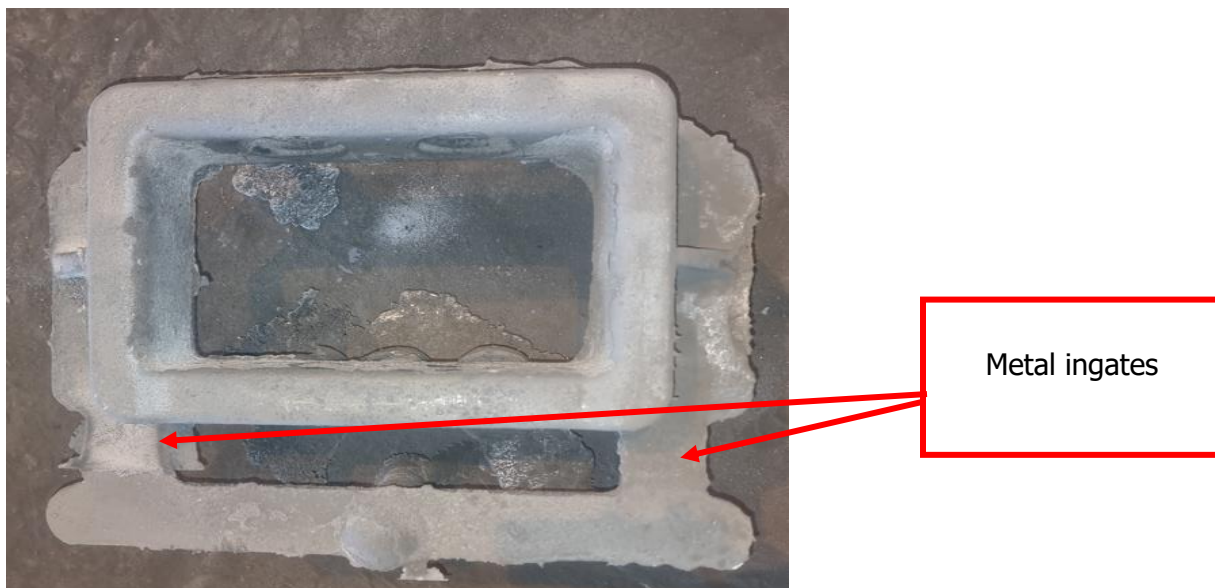


Figure 5: Illustrates the bottom view of Coupler guides and relevant sections to be cut off.

Appendix 3: Post grinding and dressing



Figure 6: Illustrates the bottom view of a Coupler guide casting post grinding and dressing.



Figure 7: Illustrates the side view of a Coupler guide casting post grinding and dressing.



Figure 8: Illustrates the side view of a Coupler guide casting post grinding and dressing.



Figure 9: Illustrates the top view of a Coupler guide casting post grinding and dressing.