TRANSNET

engineering

SPECIFICATION FOR A

REQUEST FOR QUOTATION

Supply of High-Quality Electrical Steel Laminations Cut to Specification

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RD_RD_KDS_SPEC_0126

TRANSNET ENGINEERING
PRODUCT DEVELOPMENT – R&D
KOEDOESPOORT

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Specification for a Request for Quotation for the Supply of High-Quality Electrical Steel Laminations Cut to Specification

1 Background and General

Transnet Engineering (TE) is in the process of the design and development of various products which requires high quality and precise electrical steel laminations. This is to ensure product performance according to design and to increase product quality as a whole.

The aim of this specification is to provide the supplier with the necessary information to enable the provision of a quotation for the supply of electrical steel laminations cut according to the requirements provided by Transnet within this specification.

2 Delivery Address

2.1 All items quoted on within this specification shall include delivery to the following address:

- Bay 8, Koedoespoort Depot,
  Cnr. Lynette Street and Koedoespoort Road,
  Koedoespoort,
  Pretoria,
  0186

3 Scope of Work/Services

3.1 The scope associated with this RFQ is provided within Table 1. It is required that supplier provides a response for each of the items detailed within Table 1.

Table 1: Scope Associated with this specification

#	Scope of Work/Services	Qty	Supplier Response
1	Cutting of the rotor laminations as per the drawing provided within Appendix A from the material detailed in section 4.	620	
2	Cutting of the stator laminations as per the drawing provided within Appendix B from the material detailed in section 4.	620	
3	Delivery of laminations to the delivery address provided in section 2.	1	

4 Material Requirements

4.1 The physical and technical properties of the required electrical steel laminations shall comply with all requirements detailed within Table 2 of this specification.

Table 2: Required Electrical Steel Properties

#	Item Description
1	**Electrical Steel Sheets** • Physical and Technical Properties: o Grade: M400/A400; o Thickness: 0.5 mm; o Coating: C5 or similar; and o Non-Grain Oriented.

5 Manufacturing Requirements for Laminations

5.1 It is required that the laminations be manufactured accordingly to the drawings provided in Appendix A and Appendix B within this specification.

5.2 The supplier shall note that two parts form a single laminate. This is the rotor lamination (inner component) and stator lamination (outer component) respectively. There is a clearance between the two parts of two (2) millimetre on the outer diameter of the rotor lamination.

5.3 The perimeter of a single rotor lamination is 8949 mm.

5.4 The perimeter of a single stator lamination is 8995 mm.

5.5 TE shall service the supplier with all required files (.step) upon request from the supplier.

6 Quality

6.1 As the electrical steel laminations will be used in a custom application where the packing factor has an adverse effect on performance, high quality electrical steel laminations are required.

6.2 It is a strict requirement that all tolerances be met as described within the drawings provided in Appendix A and Appendix B.

6.3 It is a strict requirement that the burr created by manufacturing process be no more than 5% of the sheet thickness. Thus, the maximum allowable thickness across the whole of the sheet shall be no more than 0.525 mm.

6.4 Material certificates shall be provided by the supplier on delivery of the laminations cut according to this specification.

7 General

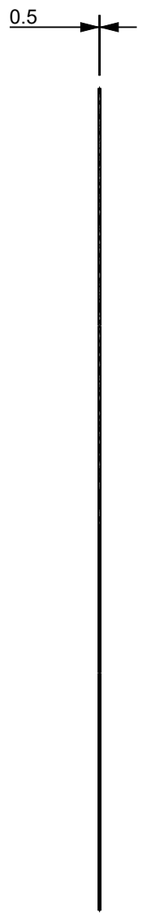
7.1 The supplier is at liberty to approach Transnet Engineering at any time for clarification of any requirement should any voids exist which impedes the supplier's ability to provide a response to this specification. This is inclusive of any additional detail that may be required on the parts (radii, hole diameters, etc.) in Appendix A and Appendix B of this specification.

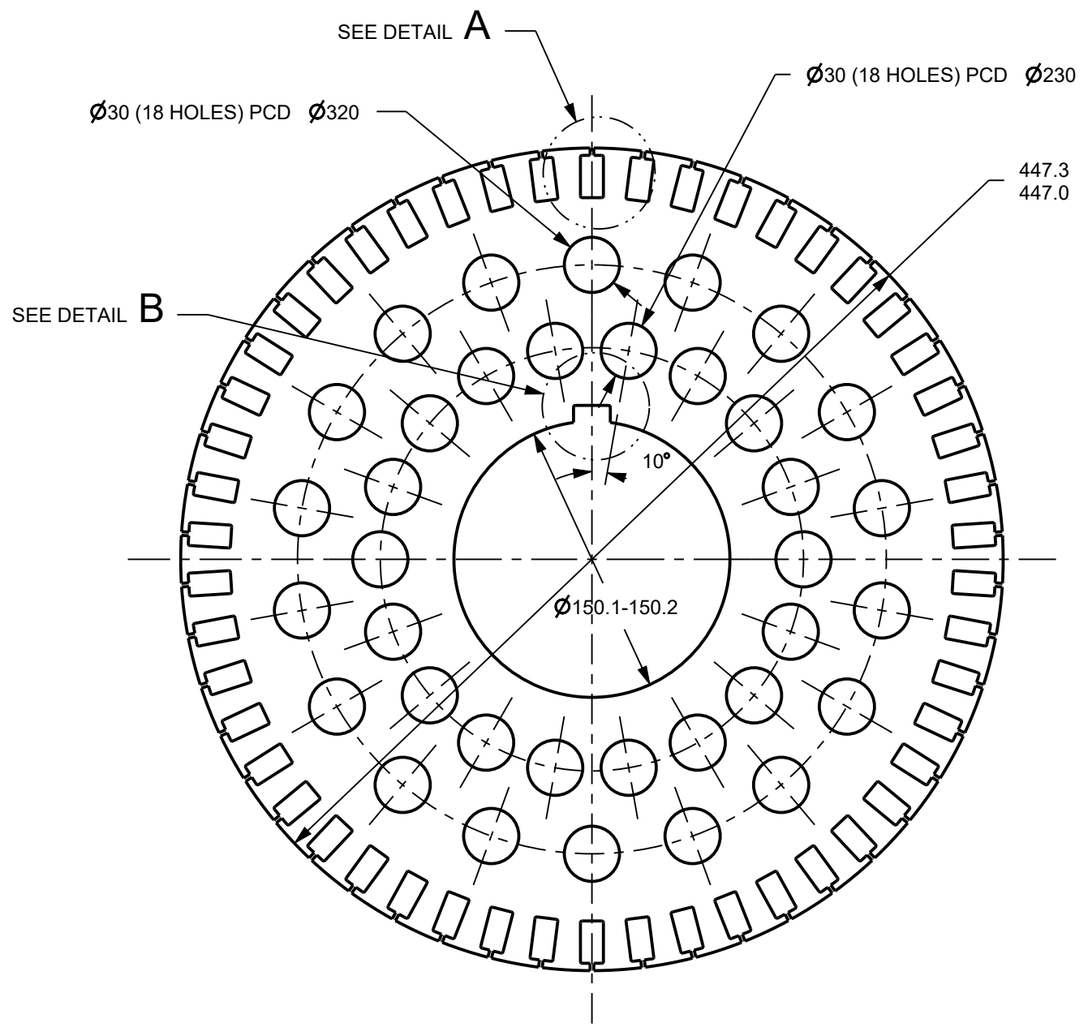
7.2 It is required that the supplier provide a response to items 1 to 3 as detailed within Table 1 of this RFQ.

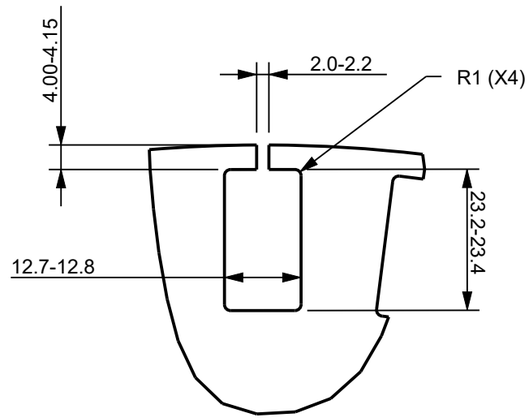
APPENDIX A: Rotor Lamination Drawing

FOR UNTOLERANCED DIMENSIONS SEE ISO 2768-1: DESIGNATION
FOR GENERAL TOLERANCE ON WELDED CONSTRUCTIONS SEE ISO 13920: CLASS

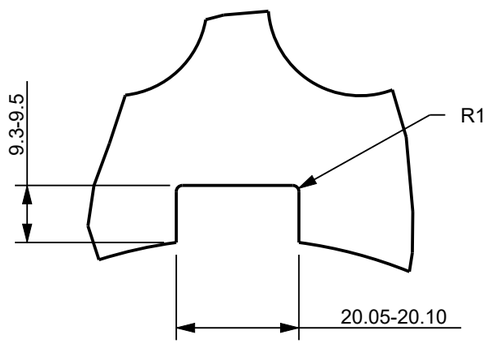
2D STATUS







DETAIL A
SCALE 1:1



DETAIL B
SCALE 1:1

NOTE:
PERIMETER: 8949.16MM

AMENDMENTS

MASS 0.39 Kg

ASSEMBLY DRG No.	DRAWN	N.B.S	
	CHECKED	J.K	
CLASS	APPROVED	I.R	
TYPE PROTOTYPE	DATE	25/01/2023	
	SCALE	3:10	
DOCUMENT REFERENCE No.			

A-3 PROJECTION

KILNERPARK R&D

ROTOR LAMINATION

SHEET 1 OF 1

MATERIAL

M400

0.5MM LAMINATION STEEL
447X447X0.5

TRANSNET ENGINEERING

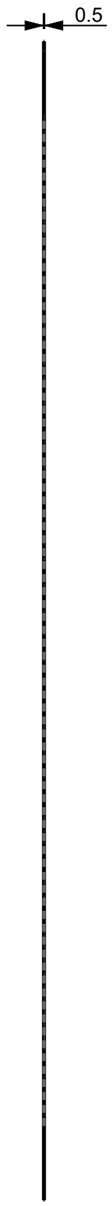
No. ROTOR

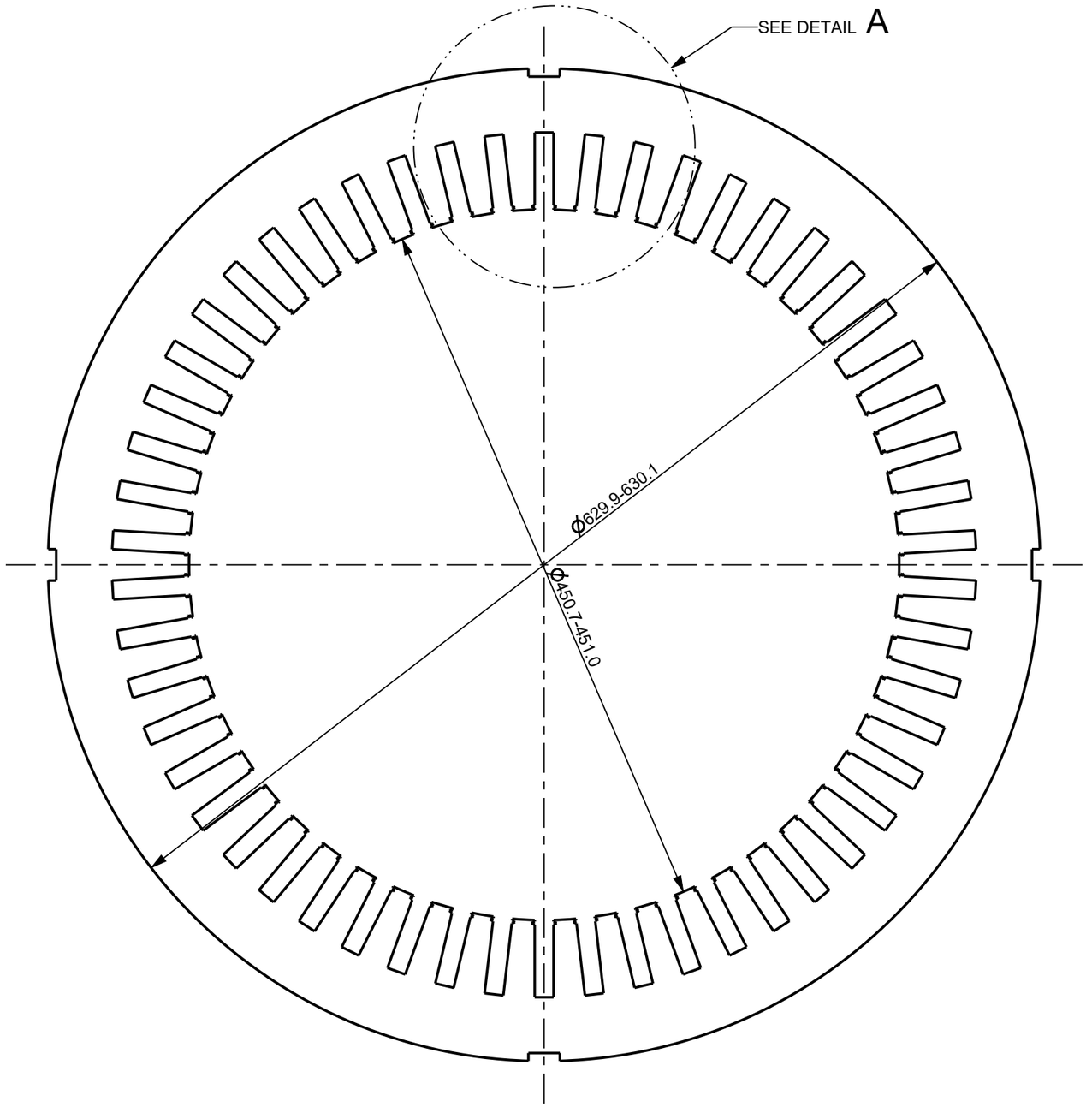
REV.

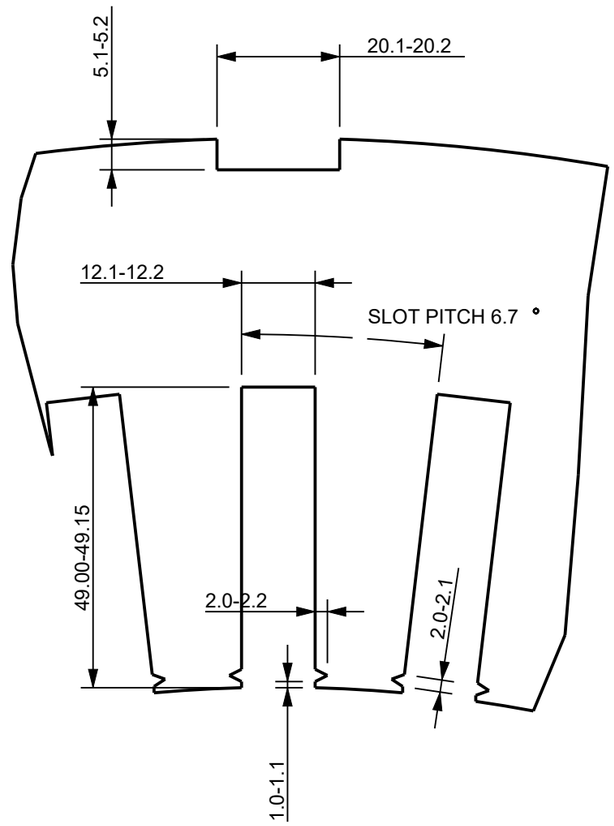
APPENDIX B: Stator Lamination Drawing

FOR UNTOLERANCED DIMENSIONS SEE ISO 2768-1: DESIGNATION
FOR GENERAL TOLERANCE ON WELDED CONSTRUCTIONS SEE ISO 13920: CLASS

2D STATUS







DETAIL A
SCALE 1:1

NOTE:
PERIMETER: 8995MM

AMENDMENTS	
MASS	0.47 Kg

ASSEMBLY DRG No.	DRAWN	N.B.S	
	CHECKED	J.K	
CLASS	APPROVED	I.R	
TYPE PROTOTYPE	DATE	25/01/2023	
	SCALE	3:10	
DOCUMENT REFERENCE No.			

KILNERPARK R&D

STATOR LAMINATION

SHEET 1 OF 1

MATERIAL

M400

0.5MM LAMINATION STEEL
630X630X0.5

A-3 PROJECTION

TRANSNET ENGINEERING

No. STATOR_V1

REV.