



# **TRANSNET ENGINEERING**

## **PRODUCT AND SERVICES DEVELOPMENT**

### **SPECIFICATION FOR THE REFURBISHMENT OF ENGINE RADIATORS**

**Revision 00**

**Date of release**

**6 May 2024**

**PD\_PRTS\_NAT\_SPEC\_066**

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Date: \_\_\_\_\_

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## 1.0. INTRODUCTION

- 1.1. This specification details the supply and delivery of all the components detailed in the subsections of this document.
- 1.2. This specification states the minimum requirements of the components and connectors, and in no way absolves the Supplier from the responsibility for sound engineering practice.
- 1.3. Any person with the intention of supplying the components and subcomponents shall ensure that the information below is complied with. The information or requirements are binding and must be supplied by either the supplier in consultation with Transnet or Transnet Engineer and must ensure that mutual agreement is reached between the two parties (Supplier and Transnet) before the supply of machinery or material.

## 2.0. TECHNICAL REQUIREMENTS

Discussed in the sub-sections below are specifications and requirements of the radiators which should be complied with for the purpose of this RFQ.

## 3.0. OPERATING ENVIRONMENT

The Components specified in this document will be exposed to the following ambient conditions:

- To be used in corrosive environment (sea level)
- Temperature: 5°C - 45°C
- Humidity: Frequently 100%
- Air Pollution: Heavy saline, dust laden and industrial fumes.

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#### 4.0. GENERAL REQUIREMENTS

The information in this section shall be provided by the supplier with the quotation on the noted components in this document.

- The cost of the product, component or system.
- The supplier shall only provide components that are of proven design.
- All components must be dust proof and watertight, where applicable.
- Each component/product shall include a minimum of one (1) year warranty. Verifiable warranty documents to be furnished by supplier.
- The supplier is considered a subject matter expert and must make Transnet aware of any shortcomings of this specification.

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## 5.0. SPECIFIC REQUIREMENTS

### 5.1. Technical Requirements

The refurbishment of the radiators should include the following, at a minimum, but not limited to:

1. Inspect and test the radiators to determine the condition of the radiators.
2. Strip and test the radiators on a flow bench.
3. Rod out the tubes of the radiators to remove all scaling and blockage in the tubes, to improve the water-flow through the radiator's tubes.
4. Refit the top tanks of the radiators and pressure test the radiators to see if there are any leaks.
5. Repair and leaks that are found and pressure test to ensure that radiators are leak-free.
6. Do an external high pressure fin flush to remove obstruction and dirt in the radiators finning. Taking care not to high pressure flush to near to the core, as to avoid damaging the fins.
7. Finn combing must be done improve the air flow and to enhance the appearance of the radiators.
8. Paint the radiators in the original colour as supplied to a DFT of 250 microns.

## 6.0. DOCUMENTATION

The following documents shall be obtained for the procurement process.

- Itemized cost breakdown
- The supplier shall provide documentation outlining the warranty of the product and what is covered.

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## 7.0. DOCUMENT AUTHORITIES

Compiled by:

A handwritten signature in black ink, appearing to read "Laventhran Naidoo", written over a horizontal line.

Laventhran Naidoo

Senior Engineer

Transnet Engineering

Date: 06.05.2024

Approved by:

A handwritten signature in black ink, appearing to read "Theo Govender", written over a horizontal line.

Theo Govender

Principal Engineer

Transnet Engineering

Date: 06.05.2024

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