



# **TRANSNET ENGINEERING**

## **PRODUCT SYSTEMS DEVELOPMENT**

### **WAGONS**

**SAMPLE TESTING FOR XB-5 UP TO XB-14 TANK WAGONS**

**Revision 00**

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**EW\_KLP\_SPEC\_2003**

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## SUMMARY OF REVISION

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The following revisions have been made in this revision:

| Change | Description |
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# 1 INTRODUCTION

## 1.1 Scope of Specification

This document defines the technical requirements and procedures for the sample test to be conducted on XB type Tank Wagons. The objective is to assess the integrity, compliance, and performance of the vessel under operational conditions, ensuring its safety and reliability.

**Note: The sample test must be conducted as per Work instruction BBH1083/Latest**

## 1.2 Regulations

- The inspection or sample test of the XB type Tank Wagons must be conducted in accordance with Occupational Health, and Safety Act, 1993.
- The Approved Inspection Authority (AIA) must be officially recognized and certified by the South African National Accreditation System (SANAS).

## 1.3 Inspection and Test Requirements

### Document Review

- Review of the Manufacturer's Certificate
- Verification of Data Plate Information
- Assessment of Previous Inspection History (Sample Test)

## 1.4 Tank Visual Inspection (Internal and external surfaces)

### External Surfaces

- Inspect the tank/barrel for corrosion
- Inspect the tank/barrel for deformation
- Inspect the tank/barrel for Paint condition (coating integrity) i.e. no flaking
- Check if the attachments are secured
- Inspect the tank/barrel welding conditions and assess any visible damage
- Check if the piping is secure with no damages

### Internal Surfaces

- Inspect the tank/barrel for corrosion, pitting and contamination

- Inspect the tank/barrel for cleanliness and removal of any residual oil or chemicals
- Inspect flange sealing faces for wear
- Check if the gasket is correct as per drawing.

## **1.5 Functional testing**

### **Pressure Test**

- Check if the safety valve is set at the correct relief pressure.
- Check safety valve operation and functionality.
- Conduct a pneumatic pressure test at 1.1 x Design Pressure. (Refer to document BBH1083/Latest)
- Observe the system for any pressure loss or leakage.

## **1.6 Non-Destructive Testing (NDT)**

### **Magnetic Particle Inspection (MPI)**

- Conduct MPI at tee joints of circumferential welds

### **Radiographic Testing (RT)**

- Conduct RT at tee joints of circumferential welds

## **1.7 Report writing**

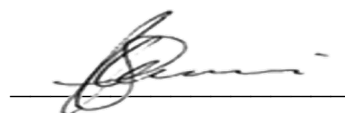
- MPI report
- Radiographic test report
- Inspection report

## 2 DOCUMENT AUTHORITIES

**Complier**

**Richard Nkosi**

**Signature**



**Designation**

**Product Technologist (Wagons)**

**Reviewer**

**Tshuxekani Chauke**

**Signature**



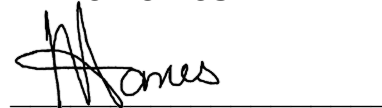
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**Signature**



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